The Effect of Interpreters on Eliciting Information, Cues to Deceit, and Rapport

SARAH EWENS

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The thesis is submitted in partial fulfilment of the requirements for the award of the degree of Doctor of Philosophy of the University of Portsmouth.
General Abstract

Interpreters are being increasingly used to bridge the language barrier between investigators and interviewees. The effect that interpreters have on investigative interviews has been neglected in both the investigative interviewing and deception detection literature. Chapter 1 introduces the topics of interpreters, deception, and rapport and emphasises the importance of studying them in investigative settings.

Chapter 2 describes the first experiment, which explored the effect of interpreters on eliciting information, cues to deceit and rapport. Truth tellers and liars spoke about their real or pretend job. Interviewees either spoke in their native language (English), a non-native language (English), or through an interpreter in their native language (in Korean, Chinese, Hispanic, Arabic, or Urdu). The interpreter interpreted the interviewee’s answers by short consecutive interpretation (when the interpreter translates all turns of talk sentence by sentence) or long consecutive interpretation (when the interpreter translates segments of talk which may vary considerably in length). Findings indicated that interviewees who spoke through an interpreter provided less detail than interviewees who spoke in their first language and interviewees who spoke a foreign language without an interpreter. The latter two groups did not differ from each other. Additionally, cues to deceit occurred more frequently when interviewees spoke without an interpreter. Rapport was not affected by the presence of an interpreter, veracity, or the mode of translation (short or long consecutive).

Chapter 3, the second experiment, examines the effect of the interpreter’s seating position (behind the interviewee, next to the interviewer facing the interviewee, or outside the room with a telephone) on eliciting information, cues to
deceit, and rapport. It also investigated the reasons why those who speak in their native language through an interpreter say less than those who speak in their native language without an interpreter. The interpreter used the long consecutive interpretation method. Interviewees either lied or told the truth about a mock secret meeting they watched, and either spoke in their native language (English), a non-native language (English), or through an interpreter in their native language (in Korean, Chinese, or Hispanic). Interviewees who spoke in their native language provided more detail than interviewees who spoke in their native language through an interpreter or interviewees who spoke in a non-native language without an interpreter. The latter groups did not differ from each other. Additionally, the amount of detail differentiated truth tellers from liars in all interview conditions and interviewees found the presence of an interpreter to be a largely positive experience. No difference was found between the three seating positions in terms of the elicitation of information, cues to deceit, and in interviewees’ self-reported experiences with the interpreter. The presence of an interpreter had no effect on rapport but liars experienced lower levels of rapport with the interviewer than truth tellers.

Chapter 4, the third experiment, introduces a model statement (MS) to the interview. This is a detailed statement unrelated to the interview topic which indicates the level of detail that is required by the interviewees in their responses. The study further investigated whether the level of English proficiency of those who were speaking through an interpreter had an effect on eliciting information, cues to deceit and rapport. Level of English was split into either high level of English proficiency or low level of English proficiency. As with the study outlined in Chapter 3, interviewees either lied or told the truth about a mock secret meeting they watched, but this time they reported that meeting twice, once before the MS and then, again, after the MS.
They either spoke in their native language (English), a non-native language (English), or through an interpreter in their native language (in Korean, Hispanic, or Russian). The interpreter used the long consecutive interpretation method and sat next to the interviewer facing the interviewee. The findings revealed that before the MS interviewees who spoke in their native language provided more detail than interviewees who spoke in their native language through an interpreter or in a non-native language without an interpreter. The latter groups did not differ from each other. After the MS interviewees who spoke in their native language and interviewees who were interviewed with an interpreter provided more commissions (additional detail) than the non-native speakers. Additionally, the native speakers provided more total detail than those who were interviewed through an interpreter who, in turn, provided more detail than the non-native English speakers. No difference was found in the amount of commissions provided by liars and truth tellers. Furthermore, no difference was found in the interpreter condition between the non-native low English proficiency participants speaking through an interpreter and the non-native high English proficiency participants speaking through an interpreter in terms of providing detail and commissions. Finally, the presence of an interpreter had no effect on rapport. No differences in rapport emerged between liars and truth tellers and between the non-native low English proficiency participants speaking through an interpreter and the non-native high English proficiency participants speaking through an interpreter.

Chapter 5 describes a questionnaire study that explores the perceptions of UK police investigators with regard to using interpreters. The questionnaire focuses on the procedural aspects of interviews with interpreters, participants’ perceptions of the impact that interpreters have on interviews, and their feelings about using interpreters.
Findings revealed an inconsistency in procedures used in terms of modes of interpretation and positioning of the interpreter; a limited awareness of the impact that interpreters may have on interviews but an overall generally positive view regarding working with interpreters. Chapter 6 summarises the main findings of this thesis along with a discussion about implications, future research and limitations.
# Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Declaration</td>
<td>1</td>
</tr>
<tr>
<td>List of Tables</td>
<td>2</td>
</tr>
<tr>
<td>Abbreviations</td>
<td>3</td>
</tr>
<tr>
<td>Acknowledgements</td>
<td>4</td>
</tr>
<tr>
<td>Dissemination</td>
<td>6</td>
</tr>
<tr>
<td>Chapter 1: General Introduction to Thesis</td>
<td>8</td>
</tr>
<tr>
<td>1. Introduction</td>
<td>8</td>
</tr>
<tr>
<td>2. Thesis outline</td>
<td>12</td>
</tr>
<tr>
<td>3. References</td>
<td>19</td>
</tr>
<tr>
<td>Chapter 2: The Effect of Method of Interpretation on Eliciting Information, Cues to Deceit and Rapport</td>
<td>24</td>
</tr>
<tr>
<td>1. Abstract</td>
<td>24</td>
</tr>
<tr>
<td>2. Introduction</td>
<td>25</td>
</tr>
<tr>
<td>3. Method</td>
<td>31</td>
</tr>
<tr>
<td>4. Results</td>
<td>41</td>
</tr>
<tr>
<td>5. Discussion</td>
<td>45</td>
</tr>
<tr>
<td>6. References</td>
<td>56</td>
</tr>
<tr>
<td>Chapter 3: The Effect of Interpreter’s Seating Position on Eliciting Information, Cues to Deceit, and Rapport</td>
<td>63</td>
</tr>
<tr>
<td>1. Abstract</td>
<td>63</td>
</tr>
<tr>
<td>2. Introduction</td>
<td>64</td>
</tr>
<tr>
<td>3. Method</td>
<td>73</td>
</tr>
<tr>
<td>4. Results</td>
<td>86</td>
</tr>
<tr>
<td>5. Discussion</td>
<td>103</td>
</tr>
</tbody>
</table>
Declaration

Whilst registered as a candidate for the above degree, I have not been registered for any other research award. The results and conclusions embodied in this thesis are the work of the named candidate and have not been submitted for any other academic award.

__________________________
Sarah Ewens

WORD COUNT = 58,872 words
List of Tables

3.1. Participant’s age and gender as a function of Interview Condition …..75

3.2. Participant’s motivation and estimated likelihood of receiving an incentive as a function of Interview Condition ..................................................86

3.3. Detail spoken through the interpreter findings as a function of veracity and interview condition .................................................................90

3.4. Interviewee in own native language findings as a function of veracity and interview condition ..............................................................93

3.5. Participants’ impressions of the interpreter (all three interpreter conditions and two veracity conditions combined) .................................99

4.1. Age and Gender Distributions as a Function of Interview Condition ……135

4.2. Detail in each Recall Attempt as a Function of Veracity and Interview Condition .................................................................................151

4.3. Commissions in each Recall Attempt as a Function of Veracity and Interview Condition .................................................................155

5.1. Frequency of officers’ responses regarding procedural aspects of using Interpreters ..............................................................................182

5.2. Frequency of officers’ responses regarding their feelings when interviewing with interpreters ..................................................................185
Abbreviations

SUE………………………………………………………….Strategic Use of Evidence
MS……………………………………………………………………..Model Statement
ICC………………………………………………….Intra-class Correlation Coefficient
IELTS…………………………………………International English Language Testing System
TI…………………………………………..Telephone Interpreting
PACE……………………………………………..Police and Criminal Evidence
CID………………………………………………Criminal Investigation Department
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Conference Presentations


Journal Publications


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**Ewens, S., Vrij, A., Leal, S., Mann, S., Jo, E., Shaboltas, A., Ivanova, M., Granskaya, J., & Houston, K.** (under review). Using the model statement to elicit information and cues to deceit from native speakers, non-native speakers and those talking through an interpreter. *Legal and Criminological Psychology.*
Chapter 1: General Introduction to thesis

Introduction

Importance of studying interpreters in investigative settings

Interpreting is commonly referred to as an oral translation and is the activity of providing spoken messages in another language (Pöchhacker, 2009). However, police interpreting is emerging as a highly specialised, distinct application of interpreting (Mulayim, Lai, & Norma, 2014) and this simplistic definition may not allow people to fully understand the challenges involved.

Having access to an interpreter during a police interview is arguably one of the most significant rights someone has (Laster & Taylor, 1994), because understanding the language of the interviewer and being able to fully express oneself is vital to enable justice (Berk-Seligson, 2009). However, interpreting entails communication and this naturally involves challenges. Such challenges include (i) ‘professional conduct’ issues, e.g., interpreters asking their own questions (thinking they are helping), interpreters giving instructions to the interviewee which have not been requested by the interviewer, and interpreters prompting the interviewee for answers again which have not been requested by the interviewer; (ii) ‘linguistics transfer’ issues, e.g., conveying meaning from one language to another, and the misrepresentation of grammatical structure and lexical items (the co-occurrence of words); and (iii) ‘non-linguistic’ issues, e.g., managing clarifications and clarifying answers, multi-component questions and answers, and handling rapport building strategies (see Mulayim et al., 2014 for a review of more challenges).
There is much debate in the legal interpreting field about the role interpreters should play. Whilst some believe they are simply a voice (González, Vasquez, & Mikkelson, 2012; Morris, 2010), others believe that interpreters are more than that and orchestrate language, culture and social factors in a communicative event (Angelelli, 2004). Simply being a voice is difficult when different languages have varying numbers of words. As a result, a transfer of meaning cannot be easily achieved by replacing one word for another. It has also been discussed that cultural differences should be explained (Roberts, 2002). However, by allowing interpreters to take on a role that is anything more than a linguistic one may interfere with the relationship between the interviewer and interviewee and makes managing the interview much more difficult (Shepherd, 2007).

**Eliciting information**

Information is the most vital part of criminal investigations (Geiselman & Fisher, 1985) and poor communication can hinder the effectiveness of such investigations (Gibbons, 2001). Having an interviewer and interviewee who are unable to communicate will seriously compromise the investigation and thus an interpreter becomes vital to avoid poor communication and subsequent loss of information. Whilst concerns have been raised about interpreters editing the answers given by interviewees, in order to respond better to the questions posed by the interviewer (Nakane, 2009), the use of incorrect equivalent words, and the omitting of details (Mulayim et al., 2014), it is unclear what effect interpreters have on the amount of information obtained from an interview.

**Deception**

Understanding deception, within investigative settings, is important in terms of developing new interview protocols that can aid the differentiation between liars and
truth tellers. Several protocols have already been developed, including ‘Imposing cognitive load’, which involves making the interview cognitively more demanding and as such uses the fact that lying is more cognitively taxing than truth-telling as an advantage (Vrij, Fisher, Mann & Leal, 2008); asking ‘unanticipated spatial and temporal questions’ which takes into consideration how liars plan their interviews (Vrij et al., 2009); and the ‘strategic use of evidence’ (SUE), which involves investigators holding back incriminating evidence to allow guilty and innocent suspects’ differing strategies to emerge (Hartwig, Granhag & Strömwall, 2007).

Until recently deception research typically focussed on having a single interviewer in the interview room (see DePaulo et al., 2003; and Vrij, 2008 for a review of studies). Research has started to investigate the effect that multiple persons have in an interview setting, such as an additional interviewer (Mann et al., 2012; Shaw et al., 2013), and found that a supportive second interviewer elicits cues to deceit. The present research builds on this work and examines the effect that interpreters may have on cues to deceit.

**Rapport**

Despite its frequent use by researchers, investigators, and clinicians, there does not appear to be a clear definition of rapport (Borum, Gelles, & Kleinman, 2009). In investigative settings the definitions appear to emphasise that rapport refers to a harmonious, positive and productive relationship between an interviewer and interviewee (Evans, Houston, & Meissner, 2012; Walsh & Bull, 2012). Seen as the most critical element of investigative interviewing (Driskell, Blickensderfer, & Salas, 2013; Fein, 2006), rapport can facilitate cooperative interviewees to talk (Fisher, 2010; Memon, Meissner, & Fraser, 2010; Milne & Bull, 1999), help gain trust (Abbe
& Brandon, 2012; Kleinman, 2006), and build a relationship which facilitates a productive interpersonal experience (Abbe & Brandon, 2012; Kleinman, 2006).

Rapport can be effectively established through both verbal and non-verbal techniques (St-Yves, 2006). Non-verbal techniques include having a relaxed posture (Collins, Lincoln, & Frank, 2002) and mimicking the interviewee (Chartrand & Bargh, 1999); however, it is verbal rapport building techniques that are recommended in adult interviews (Fisher & Geiselman, 1992). These include active listening, asking questions to show a general interest, the use of an individual’s name (Fisher & Geiselman, 1992), and the disclosure of personal information (Bedi, Davis, & Williams, 2005; Collins & Miller, 1994; Fisher & Geiselman, 1992;).

An interviewer’s choice of rapport building technique should be identified and maintained by an interpreter. Some investigators in the field believe that interpreters have a negative effect on rapport (Russano, Narchet, Kleinman & Meissner, 2014; Soufan, 2011) whilst others believe that understanding the language, only possible through an interpreter, is a key step in successful rapport building (Russano, Narchet, Kleinman & Meissner, 2014). However, to date no research has examined the effect of interpreters on rapport in investigative interviews in terms of the interviewees perspective.

The investigative interviewing literature has primarily focused on dyadic interactions and so far neglected triadic interactions. Yet, in real-life interviews there are many people, other than the interviewer and interviewee, who could be present during an interview, including a second interviewer, intermediary, appropriate adult and an interpreter. Interpreters are being used more so now than at any time in history to bridge the language barrier between interviewers and interviewees (Mulayim et al., 2014), making them vital to investigations. However, the research in this area is
almost non-existent despite triadic interactions being fundamentally different from dyadic interactions in terms of intimacy with closeness being more revealed within dyad interactions (Simmel, 1964). Therefore, this PhD thesis will examine the effect that interpreters have on eliciting information, cues to deceit, and rapport during investigative interviews.

**Thesis Outline**

This thesis consists of four independent studies which are described across four chapters. The first three studies are experimental laboratory studies where interviewees, in a ‘mock’ investigative interview setting were assigned to one of three conditions; those speaking in their native language (English), those speaking in their native language through an interpreter, and those speaking in a non-native language (English). Within each condition the participants were assigned to be liars or truth tellers. The final study is a questionnaire study which investigates UK police investigators’ procedures relating to, and perceptions of, interviewing with interpreters.

Each chapter of this thesis has been written independently from all other chapters so that they can each be understood in their own right. As a result, there is some repetition throughout the thesis. Reference sections have been included at the end of each chapter.

**Chapter 2: The Effect of Method of Interpretation on Eliciting Information, Cues to Deceit and Rapport**

This chapter examines the effect of different modes of interpretation on elicitation of information, cues to deceit and rapport. The modes of interpretation investigated in this study included short consecutive interpretation, when the interpreter translates all turns of talk sentence by sentence, and long consecutive
interpretation, when the interpreter translates segments of talk which may vary considerably in length (Viezzi, 2012).

To determine the amount of information elicited the transcripts were coded for objective and subjective detail. Objective coding included coding the number of ‘visual’, ‘spatial’, ‘temporal’, ‘auditory’ and ‘action’ details in the five detail-eliciting questions. Subjective detail required rating each of the five detail-eliciting questions on a 7-point scale (1 = not detailed to 7 = very detailed) and the average of their scores formed the subjective coding score. Cues to deceit were measured by the amount of detail provided and how this differed between liars and truth tellers, and how plausible the answers were (plausibility was measured via a 7-point scale, 1= not plausible to 7= very plausible). Rapport was measured via the nine items Interaction Questionnaire (Vallano & Schreiber Compo, 2011). Participants rated the interviewer on 7-point scales ranging from [1] not at all to [7] extremely on nine characteristics such as ‘smooth’, ‘bored’, ‘engrossed’, and ‘involved’.

An experiment was conducted in which participants (a mixture of native English and non-native English speakers) were asked to lie or tell the truth about their job. The native English speakers undertook the interview in English, the non-native English speakers spoke in their native language (Korean, Chinese, Hispanic, Arabic or Urdu) through an interpreter (via short or long consecutive interpretation), or spoke in a non-native language (English).

The main findings of this study were that (i) native English speakers provided more detail than those who spoke through an interpreter and those speaking in a non-native language; (ii) those who spoke through an interpreter and those speaking in a non-native language did not differ in the amount of detail provided; (iii) no difference emerged in detail between the short and long consecutive interpretation methods; (iv)
cues to deceit emerged in the native English condition and the non-native English
condition but not in the two interpreter conditions; (v) the presence of an interpreter
and the interpreter method had no effect on rapport; and (vi) rapport was not
influenced by the act of lying.

This experiment has been published in the Journal, *Legal and Criminological
Psychology*.

**Chapter 3: The Effect of Interpreter’s Seating Position on Eliciting Information,
Cues to Deceit and Rapport**

This chapter examined whether the seating position of the interpreter (behind
the interviewee, next to the interviewer facing the interview, or outside the room via a
telephone) would have an effect on the elicitation of information, cues to deceit and
rapport. The study examined both the speech given by the interpreter and the speech
spoken by the interviewee to ascertain whether there was a difference in the amount of
information elicited. The aim of investigative interviews is not just to elicit a lot of
information but to also elicit accurate information. Therefore, the study explored the
amount of correct and incorrect information that was given during the interview.
Finally, the participants who spoke through an interpreter were asked about their
impressions of the interpreter. These impressions were also examined.

Transcripts were coded for correct and incorrect information to determine the
amount of information elicited. Correct detail was accurately reported information,
whilst incorrect detail was any inaccurate information reported. The total number of
correct and incorrect pieces of information resulted in the total detail score. Detail
included all the perceptual details (information about what the examinee saw or
heard); spatial details (information about locations or the spatial arrangement of
people and/or objects); and temporal details (information about when the event
happened or an explicit description of a sequence of events). The proportion of correct detail was the proportion of the total number of details recalled that was correct. Cues to deceit were measured by the amount of detail provided and comparing the differences in detail between truth tellers and liars. Rapport was measured via the nine items Interaction Questionnaire (Vallano & Schreiber Compo, 2011). Participants rated the interviewer on 7-point scales ranging from [1] not at all to [7] extremely on nine characteristics such as ‘smooth’, ‘bored’, ‘engrossed’, and ‘involved’.

Impressions of the interpreter were measured through a series of questions in the post-interview questionnaire on 7 Likert point scales (1 = not at all to 7 = very much). Questions related to how the interviewee found using an interpreter (this was a combination of positive and negative statements) and how they thought the interruptions affected the interview and the interviewees’ memory.

An experiment was conducted in which participants (a mixture of native English and non-native English speakers) were asked to lie or tell the truth about a mock secret meeting that they watched. The native English speakers undertook the interview in English, the non-native English speakers spoke in their native language (Korean, Chinese, or Hispanic) through an interpreter (in one of the three seating positions), or spoke in a non-native language (English).

The main findings of this study were that (i) native English speakers provided more detail than those who spoke through an interpreter and those speaking in a non-native language, the latter two groups did not differ in the amount of detail provided (this finding occurred for the interpreters’ translations of the interviewees’ speech content as well as the interviewees’ speech content itself); (ii) truth tellers in the native-English condition provided a higher proportion of correct detail than the truth telling non-native participants who were interviewed in English or through an
interpreter (with the telephone condition as an exception) when the interpreter’s translation of the interviewees speech content was used; (iii) truth tellers in the native-English condition provided more correct detail than truth tellers in the non-native English condition and the behind the interviewee condition, with no other effects emerging when the interviewees’ own speech content was used in the analyses; (iv) transcription of the interviewees’ speech content revealed more details, and a higher proportion of correct detail, than transcription of the interpreters’ translations (v) the majority of participants were positive about using an interpreter; (vi) seating position revealed no differences in terms of detail elicited and cues to deceit; (vii) cues to deceit emerged in all five interview conditions; (viii) the presence of an interpreter had no effect on rapport; and (ix) truth tellers experienced higher levels of rapport than liars.

Chapter 4: Using a Model Statement to Elicit Information and Cues to Deceit from Native Speakers, Non-Native Speakers and those Talking Through an Interpreter

This chapter examined the effect of interpreters on eliciting information, cues to deceit, and rapport whilst using a model statement (MS) to encourage interviewees to give more information. A MS is an example of a detailed account/story unrelated to the topic of the interview and gives the interviewee an idea of the amount of detail that they are required to give. The chapter also examines the effect of interviewees’ level of English proficiency in the interpreter conditions (high or low) on information elicitation, cues to deceit, and rapport.

An experiment was conducted in which participants (a mixture of native English and non-native English speakers) were asked to lie or tell the truth about a mock secret meeting that they watched. The native English speakers undertook the interview in English, the non-native English speakers spoke in their native language
(Korean, Hispanic, and Russian) through an interpreter or spoke in a non-native language (English). Those who were interviewed through an interpreter had either a high or low grasp level of English proficiency. Interviewees were asked three initial questions in the interview. They then listened to the MS and following this were asked the three initial questions again.

Before the MS the transcripts were coded for correct and incorrect information to determine the amount of information elicited. Correct detail was accurately reported information, whilst incorrect detail was any inaccurate information reported. The total number of correct and incorrect pieces of information resulted in the total detail score. Detail included all the perceptual details (information about what the examinee saw or heard); spatial details (information about locations or the spatial arrangement of people and/or objects); and temporal details (information about when the event happened or an explicit description of a sequence of events). After the MS transcripts were coded for commissions (detail added from the time before the MS). Cues to deceit were measured by the amount of detail provided. Rapport was measured via the nine items Interaction Questionnaire (Vallano & Schreiber Compo, 2011). Participants rated the interviewer on 7-point scales ranging from [1] not at all to [7] extremely on nine characteristics such as ‘smooth’, ‘bored’, ‘engrossed’, and ‘involved’.

The main findings of this study were that (i) the native English speakers and those speaking through an interpreter provided more commissions (additional information) after listening to the MS than those speaking in a non-native language; (ii) before the MS native English speakers provided more detail than those who spoke through an interpreter and those speaking in a non-native language, whereas the latter two groups did not differ in detail; (iii) after the MS the native English speakers and
those speaking through an interpreter provided more detail than the non-native
speakers who had no interpreter; (iv) the difference between truth tellers and liars, in
the amount of detail they gave, was not more pronounced after the MS compared to
before it was heard; (v) no difference was found between the non-native participants
speaking through an interpreter in terms of low English proficiency and high English
proficiency (all with an interpreter present at interview) in terms of detail given and
commissions after the MS; (vi) the presence of an interpreter had no effect on rapport;
and (vii) rapport was not influenced by the act of lying.

Chapter 5: Police Investigators’ Procedures relating to and Perceptions of
Interviews involving Interpreters

This chapter describes a survey study which examined the perspectives of UK
police investigators about the procedures surrounding the use of interpreters in
investigative interviews as well as looking at their perceptions regarding the impact of
interpreters on the interview process and their feelings regarding the use of
interpreters. The overall findings suggested (i) an inconsistency in current procedures
used; (ii) a lack of awareness regarding the possible effects of interviewing with an
interpreter; (iii) a positive feeling towards using interpreters; and (iv) a number of
issues which should be addressed including the time it takes to obtain an interpreter,
the use of delaying tactics when calling an interpreter, and the lack of interpreters for
uncommon languages.

Chapter 6: General Discussion

The concluding chapter discusses the main findings of this PhD thesis along
with theoretical implications, practical implications, and future research suggestions.
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Chapter 2: Experiment 1

The Effect of Method of Interpretation on Eliciting Information, Cues to Deceit, and Rapport.

Foreword


Abstract

The present experiment examined how the presence of an interpreter during investigative interviews affects eliciting information, cues to deceit and rapport. A total of 60 native English speakers were interviewed in English and 183 non-native English speakers were interviewed in English (a foreign language) or through an interpreter who interpreted their answers sentence by sentence (short consecutive interpretation) or summarised their answers (long consecutive interpretation). Interviewees discussed the job they had (truth tellers) or pretended to have (liars). Interviewees who spoke through an interpreter provided less detail than interviewees who spoke in their first language and a foreign language (English) without an interpreter. Additionally, cues to deceit occurred more frequently when interviewees spoke without an interpreter. The presence of an interpreter had no effect on rapport. The findings suggest that using an interpreter provides less information and fewer...
cues to deceit. Future research should investigate how best to utilise an interpreter to gain maximum detail from an interview.

**Introduction**

In today’s society, with widespread travel, it is often the case that investigators and interviewees do not share the same first language. As a result, investigators may have little to no understanding of an interviewee’s first language and vice versa. The investigator’s inability to speak the interviewee’s first language may result in one of two practices. Firstly, investigators may conduct the interview in their first language with interviewees responding in that language which is, for them, a foreign language. Alternatively, the interview may be conducted with the aid of an interpreter in the interviewee’s first language.

Interpreting can be simultaneous, when the interpreter speaks at the same time as the individual they are interpreting, or consecutive/alternate, when the interpreter interprets what has been said after the individual has finished talking (Department of the Army, 2006; Viezzi, 2012). A further distinction can be made between two types of consecutive interpreting. Short consecutive interpretation, when the interpreter translates all turns of talk sentence by sentence, and long consecutive interpretation, when the interpreter translates segments of talk which may vary considerably in length (Viezzi, 2012). The US Navy field manual states that the interpreter should listen to an entire phrase, sentence, or paragraph before translating (Department of the Army, 2006). In other words, it states that both types of consecutive interpretation are allowed but it does not give a preference for either method. To date, little is known about the effect of short and long consecutive interpretation on, eliciting the maximum amount of information, cues to deceit, and rapport with non-native speaking interviewees.
Information-gathering

It is reasonable to suggest that interviewees speaking in their first language are more talkative and provide more detail than interviewees who are less proficient in that language. Interviewees who speak in their first language have a larger vocabulary and can better express themselves compared to those who speak in a foreign language (Ullman, 2001). In addition, those speaking in a foreign language may opt to leave out information simply because they do not know how to express some details in that language (Huang, 2010): a strategy known as ‘message reduction’ (Dornyei & Scott, 1995). Speaking in a foreign language is also cognitively demanding (Evans, Michael, Meissner, & Brandon, 2013). Hence, to lower this demand, interviewees may choose to provide a shorter statement which includes less detail. Finally, those speaking in a foreign language may say less because they need to actively inhibit neural control mechanisms that would otherwise automatically make them respond in their first language (Wang, Xue, Chen, Xue, & Dong, 2007).

Having an interpreter present allows interviewees to speak in their first language. However, the introduction of an interpreter disrupts the flow of conversation and it is likely that those speaking through an interpreter will provide fewer details than interviewees speaking in their first language. Research has shown that interruptions lead to annoyance and anxiety (Bailey & Konstan, 2006), and interviewees who are annoyed may volunteer less information (Bull, 2010; Fisher, 2010). In addition, interruptions may make memory retrieval more difficult, which would result in less information being reported (Nelson & Goodmon, 2003). Finally, interviews with interpreters can take longer and the flow of information exchange is slow. This may make an interviewee decide to be as concise as possible and only discuss the core issues without elaboration. Indeed, physicians who communicated
with patients through an interpreter were less likely to engage in small talk and, in those conversations, the patients asked fewer questions (Aranguri, Davidson, & Ramirez, 2006).

How short and long consecutive interpreting relates to conveying detail is difficult to predict. Short consecutive interpretation will result in a more complete and accurate translation of the interviewee’s speech. However, short consecutive interpretation will also take longer and produce more disruptions to the flow of the conversation. Thus interviewees may become more reluctant to volunteer details in a short consecutive interpretation interview than in a long consecutive interpretation interview.

**Verbal cues to deceit**

When interviewees say more, the likelihood of verbal cues to deceit occurring will increase. It was argued earlier that the interviews whereby interviewer and interviewee share the same first language are expected to elicit most detail. These interviews are, therefore, also most likely to elicit verbal cues to deceit.

Interviewees who are interviewed without an interpreter in a foreign language are likely to experience cognitive difficulty when communicating in that language (Evans et al., 2013). This additional mental load may further elicit cues to deceit. Lying is often more mentally taxing than truth telling, because lying involves more tasks, e.g., fabricating and maintaining a lie, creating a convincing impression, and scrutinizing the interviewer to check if they are believed (Vrij et al., 2008). Consequently, liars have fewer cognitive resources left over to cope when cognitive demand is further raised in an interview. Cognitive demand is further raised by requesting that interviewees communicate in a foreign language (Akca & Elkilic,
2011; Evans et al., 2013). Such a request should thus affect liars more than truth
tellers, with verbal cues to deceit likely to occur.

With an interpreter present, the interview becomes considerably easier for
interviewees. First, it allows them to speak in their first language, which is cognitively
easier. Second, the presence of an interpreter gives interviewees plenty of opportunity
to think during the interview. Each time the interpreter or interviewer speaks the
interviewee has time to contemplate what to say next. The opportunity to think
combined with the possibility that limited detail will be conveyed in interviews with
interpreters makes it less likely that cues to deceit will occur.

We examined two verbal cues to deceit, detail and plausibility. Deception
research has demonstrated that truth tellers typically give more detail than liars
(DePaulo et al., 2003; Masip, Sporer, Garrido, & Herrero, 2005; Vrij, 2008). Liars
may lack the imagination needed to convey the amount and type of detail that truth
tellers convey. Liars may also be reluctant to provide much detail as they fear this
detail may provide leads for investigators to check. Deception research has further
demonstrated that liars’ statements sound less plausible than truth tellers’ statements,
suggesting that if liars manage to include fabricated detail in their statements they
sometimes struggle to do so in a convincing way (DePaulo et al., 2003; Leal, Vrij,
Warmelink, & Fisher, 2012; Vrij, Leal, Mann, & Fisher, 2012; Vrij, Mann, Leal, &
Fisher, 2012). With regard to how an interpreter will affect plausibility, saying more
does not necessarily mean that what is said sounds more plausible, however saying
little or nothing would sound less plausible, when communicating through an
interpreter.
Rapport

Rapport is defined as a harmonious, positive and productive relationship between an interviewer and interviewee (Evans, Houston, & Meissner, 2012; Walsh & Bull, 2012). It is the most critical element of investigative interviewing, according to a US Intelligence Science Board report on gathering information (Fein, 2006). This conclusion is echoed by others. For example, the FBI argues that the most effective way to obtain accurate information from interviews is to use rapport-building techniques (Driskell, Blickensderfer, & Salas, 2013). Establishing rapport is important as it facilitates talking and cooperation (Bull & Soukara, 2010; Drolet & Morris, 2000; Macintosh, 2009; Valley, Thompson, Gibbons, & Bazerman, 2002), more accurate recall (Collins, Lincoln, & Frank, 2002; Vallano & Schreiber Compo, 2011), helps investigators gain interviewees’ trust and, in turn, facilitates relationship building between interviewers and interviewees resulting in a more productive interpersonal experience (Abbe & Brandon, 2012).

The question arises about how the presence of a third person (another interviewer or an interpreter) affects rapport. Dyad compared with triad interactions are seen as fundamentally different in terms of intimacy with closeness being more revealed within dyadic interactions (Simmel, 1964). Indeed, intelligence investigators in the field have mentioned that interpreters have a negative effect on rapport (Soufan, 2011). Furthermore, the US Department of Defence field manual on intelligence collection cautions that a third person may negatively impact the establishment of rapport (Driskell et al., 2013). Driskell et al., (2013) examined how the introduction of a third party affected rapport in police interviews. In contrast to what those in the field report, no difference was found in rapport when they compared interviews conducted by one or two interviewers.
The role of an interpreter is fundamentally different from that of an interviewer. The interpreter’s role is not to question or interrogate interviewees but to aid communication by bridging the barrier between two people who do not share the same mother tongue. A study which focussed on the effect of interpreters on rapport building found that trust or rapport was not affected when physicians interacted with patients through an interpreter. However, physicians reported difficulty in eliciting symptoms and discussing treatment plans through an interpreter (Karliner, Perez-Stable, & Gildengorin, 2004). In sum, although instinct might suggest that the presence of an interpreter may hamper rapport during interviews further research is needed to investigate this issue.

Although it is difficult to predict how the presence of an interpreter will affect rapport, the effect that lying or truth telling will have seems more straightforward to predict. Liars can feel guilty about lying or can be afraid of having their lies exposed (Ekman, 1985), and subsequently liars can express more negative affect than truth tellers (DePaulo et al., 2003). When someone experiences negative affect, s/he may perceive the environment (i.e., the interview or interviewer) in a negative frame of mind (Jundi, Vrij, Hope, Mann, & Hillman, 2013; Mann et al., 2012). Those in a negative mind set may become uncooperative and unresponsive to any attempt to build rapport. Currently, no research has investigated the effect that lying has on rapport. The current paper will examine this.

**Hypotheses**

We predicted that the greatest amount of detail would be provided in the interview whereby the interviewer and interviewee shared their first language compared with all the other interview conditions (Hypothesis 1). We further explored how the short and long consecutive interpreter groups and the interviewees speaking
in a foreign language compared to each other in terms of providing detail. Secondly, we predicted that verbal cues to deceit (lack of detail and lack of plausibility) would be more likely to occur in interviews with no interpreter present compared to those where an interpreter is present (Hypothesis 2). Thirdly, we predicted that interviewees would experience less rapport with the interviewer when an interpreter was present than when an interpreter was absent (Hypothesis 3). Finally, due to negative affect, we predicted that liars would experience less rapport with the interviewer than truth tellers (Hypothesis 4).

**Method**

**Design**

This study used a between subjects’ design with the independent variables being Veracity (truth versus lie) and Interpreter Condition (Native-English, Short Consecutive, Long Consecutive, Non-Native English). The dependent variables were objective detail, subjective detail, cues to deceit (number of detail and plausibility), and interviewee self-reported rapport. Transcripts were coded for objective and subjective detail. Objective coding included coding the number of ‘visual’, ‘spatial’, ‘temporal’, ‘auditory’ and ‘action’ details in the five detail-eliciting questions. Subjective detail required rating each of the five detail-eliciting questions on a 7-point scale (1 = not detailed to 7 = very detailed) and the average of their scores formed the subjective coding score. Cues to deceit were measured by the amount of detail provided and how this differed between liars and truth tellers, and how plausible the answers were (plausibility was measured via a 7-point scale, 1= not plausible to 7= very plausible). Rapport was measured via the nine items Interaction Questionnaire (Vallano & Schreiber Compo, 2011). Participants rated the interviewer on 7-point scales ranging from [1] not at all to [7] extremely on nine characteristics.
Participants

A total of 243 participants (145 Females and 98 Males) took part in the study. They were of British ($n = 60$), Chinese ($n = 45$), Arabic ($n = 19$), Korean ($n = 68$), Hispanic ($n = 48$) and Urdu ($n = 3$) background. Ages ranged from 16-75 years with an average age of 26.44 years ($SD = 10.91$ years). Participation took place in three different universities located in the United Kingdom, USA and Republic of Korea (South Korea). Analyses revealed a similar gender distribution across all four interview conditions (Native-English, Short Consecutive, Long Consecutive, Non-Native English) $X^2(3, 243) = 4.12, p = .25$, $phi = .13$. Age differed between conditions $F(3, 238) = 12.43, p < .001$, $eta^2 = .14$, with the participants in the two interpreter conditions being older ($M = 30.83, SD = 12.16; M = 30.52, SD = 15.71$) than the participants in the two non-interpreter conditions ($M = 22.02, SD = 5.30; M = 23.33, SD = 5.24$). As such age was used as a covariate in all subsequent analyses. However, when age was used as a covariate in all proceeding analyses it did not change the findings reported in the Results section regarding Subjective Detail and Plausibility. The effect of age was not significant for Subjective Detail, $F(1, 233) = .52, p = .473$, $ns$, $eta^2 = .00$ and Plausibility, $F(1, 233) = .87, p = .353$, $ns$, $eta^2 = .00$).

Procedure

An ‘occupation scenario’ similar to Mann et al. (2012) was used. Participants were recruited via advertising posters and internet announcements and asked to take part in a study about ‘Improving cross-cultural communications in interviews’.

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1 The results for Rapport changed as the Veracity main effect was no longer significant, $F(1, 233) = 1.20, p = .27$, $eta^2 = .01$ (the effect of age was significant for Rapport, $F(1, 233) = 9.96, p = .002$, $eta^2 = .04$).
Participants were emailed a ‘selection briefing form’, which contained a list of 17 different jobs, and were asked to indicate how much they knew about each job (1 = very little to 7 = a lot). They were further asked which job, if any, they currently had.

Participants were allocated randomly to the truth telling ($n = 128$) or lying ($n = 115$) condition. Truth tellers were informed that they would be interviewed about their current job. Liars were told that their task would be to convince the interviewer they had a job that they did not have. The job chosen was one that participants knew less about (i.e., an indicated score of 2 or 3 on the selection form). This score ensured the participants were in fact lying but it was not a completely impossible lie and thus reflected a real life situation.

Interviews were scheduled for a time that was no less than three days following their allocation to a veracity condition (i.e. their instruction to tell the truth or lie) and participants were not restricted on how much they could prepare. In order to motivate participants to be convincing, we informed them that they would receive a £5 (or equivalent) reward if the interviewer believed them to be telling the truth. Participants were further told that if they were not believed they would have to write a statement detailing why they thought this was the case. For ethical reasons all participants were told that the interviewer believed them and received their reward.

All participants completed a pre-interview questionnaire in which they were asked to what extent they were motivated to perform well in the interview on a 5 point scale (1 = not at all motivated to 5 = very motivated). All forms were translated and completed in the first language of each participant; any answers were translated into English. Before being interviewed, truth tellers were reminded to answer the questions truthfully about their current job and liars were reminded which job they needed to convince the interviewer they had. All participants said that they had understood the
instructions and all liars said they had remembered the jobs they had been allocated previously. A check of the transcripts revealed that all truth tellers discussed their current job and all liars discussed their allocated job. The roles of the interviewer and interpreter were explained to each participant, ensuring that they understood the interpreter was not a fellow interviewer but an impartial person bridging the communication gap.

Participants were then brought to the interview room and introduced to the interviewer and, if present, the interpreter. Both the interviewer and the interpreter were blind to the veracity of the participant. However, the interviewer was not blind to the conditions of the experiment. That is, whether there was an interpreter present or not. Two female interviewers were used for all interviews. Both interviewers were British and spoke English during the interviews. The interviewers were instructed to keep an open posture but to avoid displaying any expressiveness, as being supportive or sceptical influences participant’s responses during an interview (Mann et al., 2012). In total, twelve interpreters were used in the study; Chinese (n = 1), Arabic (n = 2), Urdu (n = 1), Korean (n = 2) and Hispanic (n = 6). Of these twelve, five had previous interpreting experience (this was established by asking the interpreters what experience they had). The interpreters were requested to speak in the first person. They were seated next to the interviewer and both the interpreter and interviewer faced the interviewee. The interpreters either interpreted the interviewee’s answers using the short consecutive method (sentence by sentence, n = 64) or the long consecutive method (gave a complete rendition of the interviewee’s response [to the best of their ability] after the interviewee had finished answering each question, n = 50). Participants were randomly assigned to one of the two interpreter conditions. In
both interpreter conditions the interpreters were instructed to give a complete
rendition of the interviewee’s responses (rather than a summary).

The study included two further conditions which did not have an interpreter
present. One condition (native-English) consisted of native English speaking
participants \( n = 60 \) who were interviewed in English. In the other condition (non-
native English), Chinese, Arabic, Hispanic and Korean native speakers \( n = 69 \) were
interviewed in English (and answered in English). The non-native languages were
equally distributed across the non-native English and interpreter conditions, ensuring
that language did not affect the non-native conditions. Inclusion criteria were used for
the two conditions which did not involve an interpreter. The native English condition
consisted of participants whose first language was English. These participants were
recruited at a university in the UK. In the non-native English condition, all
participants had an intermediate level of English, ensuring that they would be able to
get by in the interview. These participants were recruited at universities in the USA,
South Korea and the UK.

The interview commenced with three questions: ‘What is your job and how
many hours a week do you work?’; ‘How long have you been in your job?’ and
‘Where do you work?’ To make the interviewee feel comfortable and to avoid floor
effects in establishing rapport (i.e., no rapport in any of the experimental conditions),
these questions were followed by self-disclosing information from the interviewer.
That is, the interviewer answered these same questions with responses about
themselves e.g., where they worked and how long they had been in their job.
Following this, the remaining five ‘detail-eliciting questions’ were asked. They were
open rather than closed questions and required long answers: (1) ‘Please describe your
place of work in as much detail as you can.’ (2) ‘There must be one single experience
in your job that must stand out – what is that? What happened?’ (3) ‘Can you describe a typical day/shift at work, hour by hour?’ (4) ‘Can you tell me about a recent interaction or event that you were involved in within the last week that occurred in your workplace? Just something that springs to mind, but doesn’t have to be out of the ordinary, but please do describe it in detail’ (5) ‘If you were training me to do your job for a day, what things would I need to know about it?’ The questions were derived from Mann et al. (2012) and Vrij et al. (2012). See Appendix 1 for full interview schedule.

After the interview, participants completed a post-interview questionnaire which measured motivation, likelihood of receiving the £5, likelihood of writing a statement and rapport with the interviewer. To measure motivation participants were asked to what extent they were motivated to perform well on a 5 point scale (1 = not at all motivated to 5 = very motivated). Likelihood of receiving the £5 or writing a statement was measured on 7 point scales (1 = not at all to 7 = totally). Rapport was measured via the nine items Interaction Questionnaire (Vallano & Schreiber Compo, 2011). Participants rated the interviewer on 7-point scales ranging from [1] not at all to [7] extremely on nine characteristics such as ‘smooth’, ‘bored’, ‘engrossed’, and ‘involved’. The post-interview questionnaire also asked the non-native English participants, via a yes/no question, whether they would request an interpreter if they were arrested in an English speaking country.

The interviews were video and audio recorded and the English speech in the audiotapes was subsequently transcribed verbatim.

Coding

**Subjective detail.** Each of the five detail-eliciting questions was coded on a 7-point scale (1 = not detailed to 7 = very detailed) and the average score formed the
subjective coding score. The coding showed good inter-rater reliability with a second coder’s ratings of subjective detail for a sample of 60 transcripts (i.e., 25%) (Intraclass Correlation Coefficient [ICC] = .91).

**Plausibility.** Five coders rated the plausibility of the responses to each of the five detail-eliciting questions on a 7-point scale (1= not plausible to 7= very plausible). Plausibility is defined as a seemingly or apparently valid, likely, or acceptable response to the questions asked. A total plausibility score was calculated by averaging each coder’s five plausibility scores. Agreement between the five coders was satisfactory (Cronbach’s alpha = .66).

**Grasp of English.** Three coders rated the English proficiency of the non-native speaking participants who were interviewed in English without an interpreter by listening to the interviews and using a scale from Embassy English, an English language training scheme. The scale consists of five categories: [1] Beginner (those who know a few English words), [2] Elementary (those who can communicate in a basic way/can make simple sentences), [3] Pre-Intermediate (those with a good basic ability to communicate and understand), [4] Intermediate (those who have the grammar to talk about a wide number of subjects), and [5] Upper-Intermediate (those who can talk fluently and almost completely accurately). The scale is available from: http://www.embassyces.com/about/should_know.aspx. A reliability analysis revealed that the agreement between coders was excellent (Cronbach’s α = .93). When there was a disagreement between the three coders, two coders gave the same ratings and a third coder was an outlier. In such situations, the classification made by the two coders who agreed was used. The interviewees were classified as Beginner 6%, Elementary 34%, Pre-Intermediate 36%, Intermediate 20% and Upper-Intermediate 4%.

Additionally, the non-native English participants were asked if they would request an
interpreter in a police interview in an English-speaking country. Of these, 77% would have requested an interpreter in an interview situation.

**Interpretation Checks.** A MANOVA with Veracity (truth versus lie) X Interpreter (short versus long consecutive) X Interpreter Experience (not experienced versus experienced) as factors and ratings of ‘rapport’, ‘subjective detail’, and ‘plausibility’ as dependent variables, revealed a significant Interpreter Experience main effect, \( F(3, 104) = 2.78, p = .045, \eta^2 = .07 \). The interaction effects that involved Interpreter Experience were not significant, all \( F's < 2.36 \), all \( p's > .075 \).

Regarding the Interpreter Experience main effect, at a univariate level one significant effect emerged. Rapport with the interviewer was better when the interpreter was inexperienced \( (M = 5.78, SD = .92) \) than when the interpreter was experienced \( (M = 5.32, SD = .89) \), \( F(1, 106) = 6.43, p = .013, \eta^2 = .057 \). The univariate effects regarding subjective detail and plausibility were not significant, both \( F's < 2.03 \), both \( p's > .15 \). We, therefore, did not take Interpreter Experience into account in the subsequent analyses regarding subjective detail and plausibility.

To check that the interpreters interpreted correctly, the number of segments of talk they gave was recorded for the five detail-eliciting questions. Segments refer to the interpreters’ renditions of the interviewees’ answers. Both interpreter conditions were adhered to and, in the short consecutive condition \( (M = 39.08, SD = 22.30, 95\% \text{ CI} [34.92, 43.24]) \), more segments of talk were given than in the long consecutive condition \( (M = 7.38, SD = 2.39, 95\% \text{ CI} [2.67, 12.09]) \), \( F(1, 112) = 99.90, p < .001, d = 2.00 \). The interviewee said more in the long consecutive condition \( (M = 547.48, SD = 226.86, \text{ ranging from } 232 \text{ to } 1316 \text{ words}) \) than in the short consecutive condition \( (M = 463.76, SD = 205.39, \text{ ranging from } 193 \text{ to } 1037 \text{ words}) \), \( F(1, 112) = 4.15, p = .044, d = 0.51 \). In addition, we transcribed the speech of 41 interviewees who spoke
through an interpreter, translated these statements into English and coded these statements for detail. We then compared the number of details originally recalled by the interviewees with the number of details translated by the interpreters. In the short consecutive condition the interpreters gave more detail ($M = 77.81, SD = 23.23, 95\% \text{ CI} [67.24, 88.38]$) than was given by the interviewee ($M = 72.90, SD = 26.28, 95\% \text{ CI} [60.94, 84.87]$), $F(1, 20) = 3.98, p = .060, d = 0.20$. Similarly, in the long consecutive condition, the interpreters gave more detail ($M = 75.95, SD = 25.87, 95\% \text{ CI} [63.84, 88.06]$) than was given by the interviewee ($M = 67.75, SD = 23.89, 95\% \text{ CI} [56.57, 78.93]$), $F(1, 19) = 7.62, p = .012, d = 0.33$. A comparison of the mean scores between the originally given detail and translated detail indicate that the interpreters in both conditions gave about 10% more detail than the interviewees gave. Separate analyses for different type of detail revealed that interpreters ($M = 45.20, SD = 13.70, 95\% \text{ CI} [40.87, 49.52]$) appeared to give more visual details than interviewees ($M = 40.05, SD = 14.60, 95\% \text{ CI} [35.44, 44.66]$), $F(1, 40) = 20.65, p < .001, d = 0.36$. For example, one interviewee used a clarification to explain their situation saying “I took them there”. The interpreter translated this utterance as “I took them to the hospital” thus adding further detail. It would appear that interpreters were not adding detail as such but using what the interviewee had previously said. Another example is that gestures made by an interviewee were replaced with words by an interpreter. A look at the video revealed that, when describing a hall, an interviewee indicated with their hands that it was big. Although they did not say it was big the interpreter interpreted this action and verbalised “there was a big hall”.

Analyses revealed that, in the short consecutive condition, the five experienced interpreters ($M = 32.51, SD = 15.41, 95\% \text{ CI} [28.53, 36.50]$) made fewer segments of talk than the seven inexperienced interpreters ($M = 48.07, SD = 27.04, 95\% \text{ CI} [40.59,
$F(1, 62) = 8.50, p < .001, d = 0.71$. In the long consecutive condition experienced and inexperienced interpreters did not differ in segments of talk, $F(1, 48) = 3.86, p = .055, d = 0.56$.

Perhaps more important is the total number of details that the interpreters conveyed. In the short consecutive condition the experienced interpreters conveyed a similar number of details as the inexperienced interpreters, $F(1, 62) = 1.40, p = .241, d = 0.30$. In the long consecutive condition the difference between experienced interpreters and inexperienced interpreters was also not significant, $F(1, 48) = 3.74, p = .059, d = 0.55$.

**Interview length.** A 2 (Veracity) X 4 (Interpreter Condition; Native-English, Short Consecutive, Long Consecutive, Non-Native English) analysis was carried out with interview length as dependent variable. The truthful and deceptive interviews were of a similar length, $F(1, 235) = .32, p = .575, ns, d = 0.11$. Interpreter Condition had an effect on the length of interview, $F(3, 235) = 33.12, p < .001, d = 1.87$. The native-English interviews ($M = 584.92$ seconds, $SD = 183.52$, 95% CI [509.14, 660.69]) were significantly shorter than the short consecutive ($M = 1027.22$, $SD = 278.89$, 95% CI [954.46, 1102.36]), long consecutive ($M = 1058.98$, $SD = 372.12$, 95% CI [977.76, 1144.98]) and non-native English ($M = 991.93$, $SD = 329.60$, 95% CI [921.85, 1063.18]) interviews. These latter three conditions did not differ in duration. There was no significant Veracity X Interpreter Condition effect, $F(3, 235) = .60, p = .614, ns, \eta^2 = .00$. 


Results

Motivation (pre and post interview), Likelihood of Receiving Incentive and Receiving a Penalty

Four 2 (Veracity) X 4 (Interpreter Condition: Native-English, Short Consecutive, Long Consecutive, Non-Native English) ANOVAs were conducted on the four manipulation checks. Motivation before being interviewed (measured in the pre-interview questionnaire) revealed a significant Interpreter Condition effect, $F(3, 235) = 6.84, p = < .001$, $eta^2 = .08$. Tukey post hoc tests revealed that native-English participants ($M = 4.13, SD = .75, 95\% CI [3.95, 4.32]$) were significantly more motivated than the short consecutive ($M = 3.73, SD = .74, 95\% CI [3.54, 3.91]$), long consecutive ($M = 3.62, SD = .75, 95\% CI [3.41, 3.83]$) and non-native English participants ($M = 3.59, SD = .71, 95\% CI [3.42, 3.77]$). The latter three groups did not differ from each other. The Veracity main effect, $F(1, 235) = 1.25, p = .265$, $ns$, $d = 0.14$, and Veracity X Interpreter Condition interaction effect were not significant, $F(3, 235) = .20, p = .893$, $ns$, $eta^2 = .00$. The overall mean score for motivation measured pre-interview ($M = 3.77, SD = .76$ on a 5-point scale) revealed that the participants were motivated to perform well during their interviews. When motivation, measured pre-interview, was used as a covariate in all subsequent analyses it did not change the findings reported in the Results section regarding Subjective Detail, Plausibility and Rapport. The effect of motivation was not significant for Subjective Detail, $F(1, 234) = 1.49, p = .223$, $ns$, $eta^2 = .01$ and Plausibility, $F(1, 234) = 2.45, p = .119$, $ns$, $eta^2 = .01$, but was significant for Rapport, $F(1, 234) = 4.68, p = .031$, $eta^2 = .02$.

Motivation during the interview (measured in the post-interview questionnaire) showed a significant Veracity effect, $F(1, 235) = 4.68, p = .032$, $d = 0.29$, with truth tellers ($M = 3.95, SD = .75, 95\% CI [3.82, 4.09]$) being more motivated than liars ($M =$
3.73, $SD = .79$, 95% CI [3.60, 3.88]. The Interpreter Condition main effect, $F(3, 235) = 1.96$, $p = .121$, $ns$, $\eta^2 = .02$ and Veracity X Interpreter Condition interaction effect, $F(3, 235) = 1.02$, $p = .385$, $ns$, $\eta^2 = .01$, were not significant. The overall mean score for motivation measured post-interview ($M = 3.84$, $SD = .80$ on a 5-point scale) revealed that the participants were motivated to perform well during their interviews. When motivation was used as a covariate in all subsequent analyses it did not change the findings reported in the Results section regarding Subjective Detail and Plausibility, but did change the findings regarding Rapport as the Veracity main effect was no longer significant, $F(1, 234) = 3.527$, $p = .062$, $\eta^2 = .02^2$. The likelihood of receiving an incentive of £5 (or equivalent) resulted in a main effect for Veracity, $F(1, 235) = 9.32$, $p = .003$, $d = 0.37$, with truth tellers ($M = 5.33$, $SD = 1.55$, 95% CI [5.08, 5.61]) being more convinced that they would receive the incentive than liars ($M = 4.76$, $SD = 1.51$, 95% CI [4.45, 5.02]). The Interpreter Condition main effect, $F(3, 235) = 1.98$, $p = .118$, $ns$, $\eta^2 = .03$ and Veracity X Interpreter Condition interaction effect, $F(3, 235) = .23$, $p = .875$, $ns$, $\eta^2 = .00$, were not significant.

The ANOVA regarding receiving a penalty of writing a statement revealed no effect (all $F$’s < 2.29, and all $p$’s > .08). These results suggest that all participants, regardless of Veracity and Interpreter Condition, thought they were equally likely to receive a penalty ($M = 3.89$, $SD = 1.48$ on a 7-point Likert scale).

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2 The effect of motivation was not significant for Subjective Detail, $F(1, 234) = 1.26$, $p = .262$, $ns$, $\eta^2 = .01$ and Plausibility, $F(1, 234) = .176$, $p = .676$, $ns$, $\eta^2 = .00$, but was significant for Rapport, $F(1, 234) = 12.61$, $p < .001$, $\eta^2 = .051$. 

42
Subjective Detail (Hypotheses 1 and 2)

All analyses reported in this chapter refer to the answers given to the five ‘detail eliciting questions’ only. A 2 (Veracity) X 4 (Interpreter Condition) ANOVA, with subjective detail as the dependent variable, revealed a significant Veracity main effect, $F(1, 235) = 56.31, p < .001, d = 0.75$, a significant Interpreter Condition main effect, $F(3, 235) = 32.17, p < .001, \eta^2 = .29$, and a significant Veracity X Interpreter Condition interaction effect, $F(3, 235) = 16.18, p < .001, \eta^2 = .17$. Regarding the Interpreter Condition effect, Tukey post-hoc tests revealed that participants in the native English condition gave significantly more subjective detail ($M = 3.06, SD = 1.11, 95\% CI [2.89, 3.23]$) than participants in the short consecutive condition ($M = 2.21, SD = .73, 95\% CI [2.02, 2.36]$), participants in the long consecutive condition ($M = 1.93, SD = .58, 95\% CI [1.73, 2.11]$), and participants in the non-native English condition ($M = 2.10, SD = .74, 95\% CI [1.94, 2.26]$). The three latter groups did not differ significantly from each other. These results support Hypothesis 1. Regarding the Veracity effect, truth tellers ($M = 2.63, SD = 1.05, 95\% CI [2.53, 2.77]$) gave significantly more subjective detail than liars ($M = 1.99, SD = .60, 95\% CI [1.86, 2.11]$).

For the significant interaction effect, post hoc analyses were carried out in which truth tellers and liars were compared in each of the four interpreter conditions. Truth tellers ($M = 3.92, SD = .83, 95\% CI [3.67, 4.18]$) gave more detail than liars ($M = 2.19, SD = 0.52, 95\% CI [1.94, 2.45]$) in the native English condition, $F(1, 58) = 93.81, p < .001, d = 2.50$. The same pattern of results emerged in the non-native English condition, with truth tellers ($M = 2.31, SD = .83, 95\% CI [2.07, 2.56]$) reporting more detail than liars ($M = 1.89, SD = .57, 95\% CI [1.65, 2.13]$), $F(1, 67) = 6.06, p = .016, d = 0.59$. In contrast, in the short consecutive condition, truth tellers ($M
= 2.34, SD = .72, 95% CI [2.10, 2.58]) and liars (M = 2.04, SD = .72, 95% CI [1.77, 2.32]) reported a similar amount of detail, \( F(1, 62) = 2.60, p = .112, d = 0.42 \). The same pattern of results occurred in the long consecutive condition with truth tellers (M = 2.03, SD = .63, 95% CI [1.81, 2.24]) and liars (M = 1.81, SD = .50, 95% CI [1.56, 2.06]) reporting a similar amount of detail, \( F(1, 48) = 1.75, p = .192, d = 0.39 \). These results support Hypothesis 2.

**Plausibility (Hypothesis 2)**

A 2 (Veracity) X 4 (Interpreter Condition) ANOVA with plausibility as the dependent variable revealed a significant Veracity main effect, \( F(1, 235) = 38.86, p < .001, d = 0.73 \), a significant Interpreter Condition main effect, \( F(3, 235) = 17.46, p < .001, eta^2 = .18 \), and a significant Veracity X Interpreter Condition interaction effect, \( F(3, 235) = 3.44, p = .018, eta^2 = .04 \). The interaction effect is the most informative of these three effects, and the only effect discussed.

Post hoc analyses were carried out in which truth tellers and liars were compared in each of the four interpreter conditions. The same pattern of results emerged in three out of four conditions. Truth tellers (M = 5.52, SD = .36, 95% CI [5.37, 5.67]) gave significantly more plausible answers than liars (M = 4.74, SD = .47, 95% CI [4.59, 4.89]) in the native English condition, \( F(1, 58) = 52.38, p < .001, d = 1.86 \). Truth tellers (M = 4.82, SD = .51, 95% CI [4.66, 4.98]) gave also significantly more plausible answers than liars (M = 4.58, SD = .41, 95% CI [4.40, 4.75]) in the short consecutive condition, \( F(1, 62) = 4.19, p = .045, d = 0.52 \), and truth tellers (M = 4.70, SD = .70, 95% CI [4.46, 4.93]) gave significantly more plausible answers than liars (M = 4.22, SD = .69, 95% CI [3.98, 4.45]) in the non-native English condition, \( F(1, 67) = 8.09, p < .001, d = 0.69 \). In the long consecutive condition, the difference between truth tellers (M = 4.79, SD = .51, 95% CI [4.61, 4.97]) and liars (M = 4.56,
\(SD = .42, 95\% \text{ CI}\ [4.36, 4.76]\) was not significant, \(F(1, 48) = 2.86, p = .097, ns, d = 0.49\). These findings partially support Hypothesis 2.

**Rapport with the Interviewer (Hypotheses 3 and 4)**

A 2 (Veracity) X 4 (Interpreter Condition) ANOVA, with rapport with the interviewer as the dependent variable, revealed a significant Veracity effect, \(F(1, 235) = 5.48, p = .020, d = 0.31\). The Interpreter Condition main effect, \(F(3, 235) = .84, p = .476, ns, \eta^2 = .01\), and the Veracity X Interpreter Condition interaction effect, \(F(3, 235) = 1.91, p = .129, ns, \eta^2 = .02\), were not significant. Thus no support was found for Hypothesis 3.

Truth tellers reported significantly higher levels of rapport with the interviewer \((M = 5.65, SD = .88, 95\% \text{ CI}\ [5.49, 5.80])\) than liars \((M = 5.38, SD = .87, 95\% \text{ CI}\ [5.22, 5.54])\), which supports Hypothesis 4 although this effect was no longer significant when age or motivation during the interview were introduced as a covariate (see above).

**Discussion**

**Eliciting Information**

The English participants who were interviewed in English (their first language) provided more detail than the non-native English participants who spoke in English (for them a foreign language) and who were interviewed through an interpreter, supporting Hypothesis 1. In all likelihood the non-native participants who spoke in English lacked the vocabulary to be as detailed as their English counterparts or experienced considerable cognitive load during the interview. Lack of vocabulary became evident in the length of the interviews. Although those who spoke in a foreign language provided less detail than the native English speakers, their interviews lasted considerably longer.
Furthermore, it could be that the participants who were interviewed through an interpreter became annoyed because of the interpreter interrupting them and, therefore, said less. It could also be that the interpreter’s disruptions hampered memory retrieval. Finally, perhaps the presence of an interpreter made the interviewee decide to be as concise as possible. Of these three explanations, the first explanation is the least likely. If participants became annoyed by the presence of the interpreter, this would have had an effect on rapport, which was not the case (see below). Also participants in both interpreter conditions provided a similar amount of detail as those who spoke in a foreign language. With an interpreter present the interviewees could speak in their first language which gives them the possibility to provide much detail, yet they provided the same amount of detail as those who spoke in a foreign language and less detail than the native English speakers. Thus, it could be that interpreters are not being used effectively to gain the maximum amount of detail possible.

Interestingly, short and long consecutive interpretations resulted in the same amount of information being conveyed. One could argue that compared to a long consecutive interpretation, short consecutive interpretation will result in a more complete and accurate translation of the interviewee’s speech and, therefore, in more detail. However, this was not found. For the current experiment, the most likely (albeit speculative) explanation is that the many disruptions in the short consecutive interpretation made interviewees more reluctant to volunteer information.

An alternative explanation is that the lack of difference in detail between the two interpreter conditions is due to an inflated account from the interpreters. That is, perhaps interviewees in the long consecutive condition provided fewer detail than interviewees in the short consecutive condition, but that the interpreter in the long consecutive condition ‘corrected’ this by adding more detail. We believe that this is an
unlikely explanation. Indeed, when we made a comparison between what the interpreter reported and what the interviewee actually said, we found that interpreters did in fact interpret more information than was reported by the interviewee. However, this information was not additional information. Rather the interpreters sometimes repeated an aspect that had been previously mentioned by the interviewee. Importantly, this occurred in both the short and long consecutive interpretation styles and shows that even when an interpreter is interpreting sentence by sentence they have the ability to make ‘errors’. This is an important aspect which requires further investigation and is something that also occurs in real life, as seen in the trial of Oscar Pistorius who was accused of murdering his then girlfriend Reeva Steenkamp. The first witnesses, Michelle Burger, gave evidence through an interpreter, as her native language was Afrikaans and the trial was being conducted in English. Although the witness could speak and understand English very well (as became clear in the trial), she chose to give her evidence in the language she felt most comfortable with. Surprisingly, throughout her evidence she was correcting the interpreter and she told the judge that the interpreter was not interpreting correctly what she had said. These errors had a big impact on her evidence as the defence picked up on any inconsistency in details, trying to discredit her as a witness. A clip of this is available from:
https://www.youtube.com/watch?v=CcASMGKhkAU

Cues to Deceit

Detail emerged as a cue to deceive. Liars were less detailed in the native English speaking condition but not in the conditions where an interpreter was present, supporting Hypothesis 2. Moreover, in the non-native English speaking condition liars provided less detail than truth tellers (also supporting Hypothesis 2). It may be that this is the result of the difficulty the interviewees experienced while speaking English.
Because the act of lying is more difficult than the act of truth telling the additional request to speak in a foreign language affects liars more than truth tellers, resulting in cues to deceit. Apart from being less detailed, liars were also less plausible than truth tellers when they spoke in their first-language or in a foreign language. In addition, liars were less plausible than truth tellers in the short consecutive interpretation condition, despite not being less detailed than truth tellers in this condition. Apparently, it was the quality rather than the quantity of detail that gave liars away in that condition. One could argue that during long consecutive interpretation an interpreter has more opportunity to express his or her own ‘voice’ compared to during short consecutive interpretation. Thus, the measure of plausibility might be created by the interpreter rather than the truth tellers and liars, which could explain the lack of difference in plausibility between truth tellers and liars in the long consecutive interpreter condition.

Plausibility was measured by reading the transcripts of the interviews and the coders were unaware that an interpreter was present or absent. Plausibility has been reliably coded in this way in deception research before (DePaulo et al., 2003; Leal et al., 2012; Vrij et al., 2012; Vrij et al., 2012). However, in theory, plausibility may change if someone was to view video footage where an interpreter is clearly present or not, which would match real life more closely. For example, the interpreter may think that an answer sounds plausible or implausible and may reveal this through his/her demeanour. This demeanour, in turn, may affect the veracity decision made by the observer. Future research should investigate this.

Although differences emerged in terms of detail and plausibility this does not automatically mean that observers will be able to distinguish liars and truth tellers in interviews with or without an interpreter or in interviews where interviewees are
speaking in a non-native language. An important addition to this study would be to run an experiment to see whether the cues to deceit developed in this study could be used by laypersons to accurately judge the veracity of participants based on whether they were interviewed with an interpreter or not. Due to the scope of this study there was not enough time to complete such a study. However, future research should investigate this.

Rapport

The presence of an interpreter had no effect on interviewees’ judgements of rapport with the interviewer, leading to the rejection of Hypothesis 3 that interviewees would experience less rapport with the interviewer when an interpreter was present. This supports the scarce research in this area (Karliner et al., 2004). However, it goes against the views of criminal and intelligence investigators in the field, who believe that the presence of an interpreter has a negative effect on rapport (Soufan, 2011; Driskell et al., 2013).

There are some noticeable differences between our experiment and real life criminal and intelligence interviews which may explain this discrepancy. Firstly, real-life interviews are considerably longer than the interviews in the present experiment. We cannot rule out that some consequences of having an interpreter present in an interview, for example the interruptions they cause in the flow of conversation will have a negative effect in the longer term. Perhaps people tolerate disrupting factors initially but tolerate them less as time progresses. Secondly, the interviewees in the present study were not asked to rate the level of rapport that they thought occurred in the interview. Future research should investigate this.

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3 The interviewers in the present study were not asked to rate the level of rapport that they thought occurred in the interview. Future research should investigate this.
present experiment reported experiencing high levels of rapport with the interviewers. This rapport could have been higher than typically obtained in the field due to the context of the experiment and reduced stakes involved. In real-life situations we would expect suspects to feel more uncomfortable and potentially reluctant during interviews and this may have a negative effect on establishing rapport. Alternatively, it may be that interpreters have no effect on rapport. Research has shown that when interruptions are required in conversation they do not lead to emotional arousal or disruption of performance (Morris & Perez, 1972). Thus, as long as the interpreter’s disruptions aid the interviewee, rapport may not be affected from their perspective at least. Alternatively, it could be that being interviewed in English without an interpreter could be frustrating for a non-native English speaker due to not being able to express him/herself in the way s/he wants to. This frustration could hamper rapport with the interviewer. Although officers might perceive interpreters as interfering, this may not be the perception of interviewees. Thus the relationship between the interviewer and interpreter is also an important one, which would benefit from future investigation.

Methodological reasons may also be responsible for the null finding regarding the effect of an interpreter on rapport. A null finding could occur due to lack of sensitivity in the measurement of rapport. However, our measurement was not insensitive as it did reveal that rapport with the interpreter was better when inexperienced interpreters were present than when experienced interpreters were present. We have no plausible explanation for this finding, but it shows that the effect of interpreter experience on rapport with the interviewee is worth examination in future research.
Rapport was not negatively influenced by the act of lying, although we hypothesised such an effect in Hypothesis 4. The findings therefore reveal a complex picture for rapport. It was not influenced by ‘obvious’ factors such as the use of an interpreter and deception, but was correlated with factors such as experience of the interpreter, age of the interviewee and interviewee’s motivation to perform well.

**Short – Long Consecutive Interpretation Comparison**

One of the aims of the experiment was to compare short and long consecutive interpretation. We found little difference between them, including no difference in rapport and the same amount of detail elicited. This detail was significantly less than detail elicited in the first-language English speaking condition and similar to the amount of detail elicited in the foreign language speaking condition. Truth tellers and liars provided similar amounts of detail in both interpreter conditions, unlike in the two non-interpreter conditions, where truth tellers reported more detail than liars. Only plausibility revealed a difference between the two interpreter conditions. Truth tellers were rated as more plausible than liars in the short consecutive interpreting condition (as well as in the two non-interpreter conditions) but no difference in plausibility emerged in the long consecutive interpreting condition. However, the plausibility results for the short and long consecutive interpreting conditions were almost identical and the results in the short consecutive interpreting condition only just reached significance. With barely a difference emerging between the two interpreter conditions, common sense might dictate that interviewers and interviewees would prefer long consecutive interpreting as it leads to fewer disruptions. However, further research is required to replicate the finding that the two methods of interpretation do not differ in terms of accurate information elicited from interviewees.
Most of the questions that were asked in the current experiment were short (one sentence questions). The result of this was that no difference existed between the two interpreter conditions in how the questions were presented to the interviewee. In real life longer questions could be asked which may result in larger differences between short and long consecutive interpretation in presenting the questions. However, whether a difference in short or long consecutive interpretation of the questions does have an effect on the response given by the interviewee remains to be seen, and is a question for future research.

**Experience of the Interpreter**

We used a mixture of experienced and inexperienced interpreters. Although in real life it is more likely that experienced interpreters are used, it is not uncommon for police officers, relatives (including children) or even crime scene witnesses to carry out the interpretation (Berk-Seligson, 2000). The comparison between the inexperienced and experienced interpreters in the present experiment can be summarised as follows. The experienced interpreters made more renditions (e.g., interpreted the speech back in more turns) than the inexperienced interpreters but, in terms of detail, no difference between experienced and inexperienced interpreters emerged. Since detail is the crucial variable it means that the experience of the interpreter had no discernible effect in the present experiment. However, we do not suggest that interpreting is a job that does not require experience. Our findings showed that the difference in the amount of detail elicited by experienced and non-experienced interpreters just failed to reach significance. Thus, if more participants had been recruited a significant medium effect size could have been obtained, suggesting that experience does matter in terms of the amount of detail gained.
Methodological Issues

In a study like this, it is difficult to decide who to recruit as a control group. We decided upon native English speakers, speaking in English as a control group. We did so because this is an interesting comparison from an applied perspective. That is, English speaking interviewers are interested in how the responses delivered by non-native speakers, who either speak in English or in their native language through an English speaking interpreter, compare to the responses of native English speakers. Using English speakers as the control group meant that the allocation of participants to the experimental conditions was not random as native English speakers were not allocated to the interpreter conditions and vice versa. However, both the native and non-native English speakers were recruited from similar populations (university students and people working at the university) so we do think that the native and non-native English speakers were comparable on characteristics other than having English as their first language. In cases where we found differences in characteristics between experimental groups, in age and motivation, analyses of covariance revealed that such differences had no effect on eliciting detail and cues to deceit.

A limitation of the study was the lack of ground truth in that all the information from the truth tellers about their current jobs could not be verified and it could not be guaranteed that those who were asked to lie about their job were actually lying. This lack of ground truth is not uncommon in deception research (Vrij, 2008). Participants were asked what their current job was before they were allocated to a veracity condition and there is no reason to believe anyone would be lying at this stage. This study only measured English proficiency in participants in the non-native English condition without an interpreter and not those in the interpreter conditions. It is possible that language proficiency in the interpreter conditions affected the
engagement and behaviour of the participants. However, since it is unlikely that the English proficiency of participants differed between the short and long consecutive conditions (the participants were randomly allocated to these two conditions) it is unlikely that this affected the findings. That said future research should examine the effect of English proficiency on the engagement and behaviour of interviewees when an interpreter is present.

We measured English proficiency with a scale from Embassy English. Of course, alternatives such as IELTS (International English Language Testing System) exist. We chose the Embassy English scale because it is easy to apply and resulted in high inter-rater agreement between the different coders.

The decision to call an interpreter for non-English speaking suspects in police interviews in the United Kingdom usually lies jointly with the interviewing and/or arresting officer and the Custody Sergeant (Russell, 2002). Perhaps our findings could advise those who have to make decisions about the use of interpreters in interviews. Our results suggest that it is preferable to interview interviewees in their own language. Thus, rather than introducing an interpreter, it may be preferable to have an interviewer who speaks the interviewee’s language. This, of course, will not always be possible.

**Conclusion**

The presence of an interpreter makes interviewees say less compared to when they speak in their first language without an interpreter. In fact, talking through an interpreter did not result in more detail than speaking in a foreign language. This has implications for the real world in that investigators should think carefully about the pros and cons of using an interpreter if there is chance that an interviewee could manage without. Cues to deceit emerged when interviewers and interviewees shared
the same first language or when the interviewee spoke in a foreign language.

However, the former requires an interviewer who speaks the interviewee’s first language, whereas the latter requires that the interviewee has a certain understanding of the foreign language s/he is requested to use in an interview. The presence of an interpreter did not affect rapport in the present experiment. We do not rule out, however, that an interpreter will have an effect on rapport in the real world when the interviews take longer and when the rapport between interviewer and interviewee may be more difficult to establish.
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Objective coding was also carried out on the data. The transcripts were coded for the number of ‘visual’, ‘spatial’, ‘temporal’, ‘auditory’ and ‘action’ details in the five detail-eliciting questions. A second coder rated a sub-sample of 60 transcripts (25%). The inter-rater reliability between the two coders for the objective detail was very good (Intra-class Correlation Coefficient (ICC) = .87). We correlated objective and subjective coding. The correlation revealed a significant overlap between the objective coding and subjective coding ($r = .81$). This indicates that the subjective ratings gave a good indication of the details actually present in the statements. To avoid repetition we decided to only report the subjective analyses. We opted for presenting the subjective analyses as investigators in real life make such judgements. The results for the objective and subjective details showed a 100% match. That is, all effects that were significant in the objective analyses were also significant in the subjective analyses and vice versa. Readers wishing more information about the coding and statistics of the objective coding can do so by contacting the authors.

Occasionally during the interviews, interviewees asked for questions to be clarified or the interviewer intervened when the participant’s answer did not match the question. This explains the average seven segments in talk in the long consecutive condition for the five detail eliciting questions.

As we reported above, a 2(Veracity) X 2 (Interpreter Condition) X 2 (Interpreter Experience) ANOVA resulted in a main effect for Interpreter Experience only.
Chapter 3: Experiment 2
The Effect of the Interpreter’s Seating Position on Eliciting information, Cues to Deceit and Rapport

Foreword

The study outlined in this Chapter has been submitted to the Journal, Psychology, Crime and Law. There is a difference between this Chapter and the submitted manuscript. This Chapter examines the effect an interpreter has on rapport however rapport was not included in the manuscript.

Abstract

The present experiment examined how the seating position of interpreters during investigative interviews affects information elicitation and cues to deceit. A total of 60 native English speakers were interviewed in English and 200 non-native English speakers were interviewed in English (a non-native language) or through an interpreter who either sat next to the interviewer, behind the interviewee or interpreted via the telephone. Interviewees either lied or told the truth about a mock security meeting they watched. Interviewees who spoke in their native language provided more detail than interviewees who spoke in their native language through an interpreter or in a non-native language (English) without an interpreter. The latter groups did not differ from each other. Additionally, the amount of detail differentiated truth tellers from liars in all interview conditions and interviewees found the presence of an interpreter to be a largely positive experience. The interpreter’s seating position had no effect on the findings. The presence of an interpreter had no effect on rapport.
Truth tellers experienced higher levels of rapport than liars. Future research should investigate ways to elicit more detail from interviewees when an interpreter is present.

**Introduction**

Due to increasing ethnic diversity in many countries the number of people who are less than proficient in the language of the country they now live in is rising. This, together with an increase in worldwide travel, means that police investigators and interviewees may not share the same native language, which, in turn, may limit their communication. The investigators may conduct the interview in their native language with interviewees responding in for them a non-native language. However, poor communication can hinder the effectiveness of investigative interviews and using interpreters is often vital to investigations (Gibbons, 2001).

The main finding of the study described in Chapter 2 (Ewens et al. 2014) was that non-native English interviewees speaking in English provided the same amount of information as non-native English interviewees speaking in their native language through an interpreter. In other words, the presence of an interpreter did not make interviewees to saying more. In addition, the non-native English participants said less than native English speakers who were interviewed in English (without an interpreter). The present experiment aims to replicate the important finding that the presence of an interpreter does not result in more information. In addition, Ewens et al. (2014) speculated about why this effect may have occurred and so the present experiment examined these speculations by asking interviewees about their experiences with the interpreter. Although such self-reports may not reveal conclusive evidence, they are important as they can reveal trends in interviewees’ thinking and, as such, elicit specific ideas for future research. Moreover, the current study examined the effect that the interpreters seating position had on eliciting information and cues to deceit. In
practice various interpreter seating positions are employed but their effect has never been examined. The effect of seating position on the elicitation of information and cues to deceit is an important applied issue for practitioners and policy makers (Russano, Narchet & Kleinman, 2014). The current study made a distinction between providing correct and incorrect information. This is an important distinction because, ideally, investigators use interview protocols that deter liars from lying. This distinction between correct and incorrect information is typically neglected in deception research. Finally, Ewens et al. (2014) analysed their interviewees’ speech as translated through the interpreter. Of course, this may differ somewhat from what the interviewees actually said as the interpreters may have translated details incorrectly or omitted details. The current study compared the interviewees’ response content with the interpreters’ translations of those responses. All of the transcripts from the interpreted interviews will be analysed unlike the study reported in Chapter 2 (Ewens et al., 2014) which only analysed a sample of the interpreter transcripts (41 transcripts).

**Information-Gathering**

Interviewees who communicate in their native language could, in theory, provide more detail than interviewees communicating in a non-native language, which they are not proficient in. Interviewees who speak in their native language have a larger vocabulary and can express themselves better (Ullman, 2001). Those who speak in a non-native language may leave information out because (i) they are unable to express these details in that language (Huang, 2010), (ii) speaking in that language is too cognitively demanding (Evans, Michael, Meissner, & Brandon, 2013), or (iii) they need to actively inhibit neural control mechanisms that would otherwise automatically make them respond in their native language (Wang, Xue, Chen, Xue, & Dong, 2007).
An advantage of using an interpreter is that it allows interviewees to speak in their native language, therefore, hopefully, bypassing the issues encountered when an interviewee must speak in a non-native language. In theory, those who speak through an interpreter could say as much as those who are interviewed in their native language. However, research has shown that those speaking through an interpreter provide the same amount of information as those who speak in an non-native language and significantly less information than those interviewed in their native language without an interpreter (Ewens et al, 2014). Three explanations were given for this in chapter two. First, the introduction of an interpreter disrupts the flow of conversation. Research has shown that interruptions during conversations lead to annoyance and anxiety (Bailey & Konstan, 2006), and that interviewees who are annoyed volunteer less information (Bull, 2010; Fisher, 2010). Second, interruptions may make memory retrieval more difficult, which would result in less information being reported (Nelson & Goodmon, 2003). Third, an interviewee can decide to be concise when an interpreter is present given the extra time it takes to communicate through an interpreter (similar to when people are more concise when talking to a person who is hard of hearing). We predicted that more detail would be provided in interviews where the interviewer and interviewee shared their native language than in interviews where interviewees speak in a non-native language or speak through interpreters (Hypothesis 1). We further predicted that in the post-interview questionnaire interviewees would report that they (i) found the presence of the interpreter largely disruptive and annoying, (ii) found the presence of the interpreter made memory retrieval more difficult and (iii) were more concise in their responses because the interpreter was present (Hypothesis 2).
Seating Position of the Interpreter

The US Army Field Manual 2-22.3 (hereafter AFM), the “law of the land” regarding intelligence interviews conducted by US personnel, states that the interpreter should be placed in a position that enhances the mood or general impression that the interviewer wants to establish (U.S. Department of the Army, 2006). The AFM proposes two possible seating positions for the interpreter: Behind the interviewee or next to the interviewer. The AFM posits that by placing the interpreter behind the interviewee anxiety levels will be increased or maintained, which facilitates a dominant position for the interviewer. Placing the interpreter next to the interviewer (the approach taken by Ewens et al., 2014, Chapter 2 of this thesis) is seen as a more relaxed approach. Whilst the AFM recommends the ‘behind the interviewee’ position during interrogations, one could speculate that placing the person to whom the interviewee must directly communicate behind them may create an awkward social dynamic (Cross Cultural, Rapport-Based Interrogation, Version 5, 2010). Interestingly, trained FBI interpreters reported that they mostly sat next to the interviewer (Russano, Narchet & Kleinman, 2014). In the UK, there appears to be no consistent method in seating position in police interviews with both being used (Vaughan, 2009 and see Chapter 5 of this thesis). In addition to these two seating positions, there is the opportunity to interpret via the telephone. Telephone interpreting (TI) is used by Australian Immigration (Ozolins, 2011), and in Swedish police interviews (Wadensjö, 1999). UK procedure indicates that TI should only be used for procedural matters (e.g., name and address details, fingerprints/photographs, and reason for arrest) but not for evidential procedures such as investigative interviews (Cambridgeshire Police, 2015). The advantages of TI above sitting behind the interviewee or next to the interviewer include not having to wait as long for an
interpreter to arrive, lower cost, and no discrimination towards the interviewee based on physical characteristics (Kelly, 2008). Disadvantages include quality of sound (Kelly, 2008), and the interpreter being unable to capture the communicative cues that guide the interpretation (Wadensjö, 1999).

To date, little is known about the effect of the interpreter’s seating position on eliciting information. Visual contact between two people tends to increase their interaction rates (Hearn, 1957), which in turn could lead to more information being elicited from interviewees. Visual contact is only present for the ‘next to the interviewer’ seating position. Furthermore, people talk less when they are socially anxious (Schlenker & Leary, 1985). The AFM states that by positioning the interpreter behind the interviewee, their anxiety will be increased. We therefore hypothesised that the ‘next to the interviewer’ seating position for the interpreter would elicit more information from interviewees than the ‘sitting behind the interviewee’ position and telephone interpretation (Hypothesis 3).

**Verbal Cues to Deceit: Quantity of Detail**

When interviewees say more, the likelihood of verbal cues to deceit occurring will increase because words are the carriers of these cues (Vrij, Mann, Kristen, & Fisher, 2007). Since the interviews whereby interviewer and interviewee share the same native language are expected to elicit most detail, these interviews are also most likely to elicit verbal cues to deceit.

Interviewees who are interviewed without an interpreter in a non-native language are likely to experience cognitive difficulty when communicating in that language (Evans et al., 2013). This additional mental load may elicit cues to deceit. Lying in investigative interviews is often more mentally taxing than truth telling, because lying involves multiple tasks, including fabricating and maintaining a lie,
creating a convincing impression and scrutinizing the interviewer to check if s/he believes the lie (Vrij et al., 2008). Therefore, liars have fewer cognitive resources left over. Cognitive demand is further raised by requesting interviewees communicate in a non-native language (Akca & Elkilic, 2011; Evans et al., 2013), which should affect liars more than truth tellers, with verbal cues to deceit likely to occur.

With an interpreter present, the interview may become easier for interviewees. First, it allows interviewees to speak in their native language, which is cognitively easier (Evans et al., 2013), and second, each time the interpreter translates an answer the interviewee has time to contemplate what to say next. This reduced cognitive load, combined with the possibility that limited detail will be conveyed in interviews with interpreters, makes it less likely that cues to deceit will occur.

In sum, cues to deceit are more likely to occur (i) when interviewee and interpreter share the same language because these interviews are likely to elicit many details, and (ii) when interviewees speak in a non-native language without an interpreter due to the cognitive difficulty associated with such interviews. Cues to deceit are less likely to occur when an interpreter is present because the presence of the interpreter makes the interview easier. We examined only one cue to deceit: detail. We singled out this cue for two reasons. First, detail is one of the most diagnostic cues to deceit. For example, Vrij (2008) found that detail emerged as a cue to deceit in 22 out of 29 studies in which it was examined (76%). No other cue to deceit achieved such a high percentage. Second, eliciting information is the main aim of investigative interviewing (Bull, 2010; Fisher, 2010; Vrij, Fisher, & Hope, 2014) and the variable ‘detail’ covers this aim entirely. Deception research has shown that truth tellers typically give more detail than liars (DePaulo et al., 2003; Masip, Sporer, Garrido, & Herrero, 2005; Vrij, 2008). Liars may lack the imagination to convey the amount and
type of detail that truth tellers convey. Liars may also be reluctant to provide much
detail through fear that such details may provide leads for investigators to check
(Nahari, Vrij, & Fisher, 2014). We thus predicted a Veracity X Interview Condition
interaction effect and predicted that truth tellers would be more detailed than liars,
particularly in the interviews without an interpreter (Hypothesis 4).

**Correct and Incorrect Information**

Deception research mainly focuses on ‘cues to deceit’ (Vrij, 2008; Vrij &
Granhag, 2012). However, the aim of an investigative interview is to elicit accurate
information (Bull, 2010; Fisher, 2010). Liars rarely make up entire stories but
typically embed their lies in truthful stories (Leins, Fisher, & Ross, 2013; Vrij, 2008),
which means that liars also provide accurate information. It is therefore important to
examine the amount of correct and incorrect information liars provide and how this
may differ when speaking in a native language, a non-native language or through an
interpreter. We examined these important issues typically neglected in deception
research in the present experiment. The ideal interview setting represents a scenario
whereby liars are encouraged to give more correct information.

Liars embed their lies in truthful stories because they may be worried that (i)
they lack the imagination to fabricate lies that are detailed enough, (ii) their lies give
away leads to investigators or, (iii) they will forget the lies they have told (Nahari,
Vrij, & Fisher, 2012; Vrij, 2008). With those concerns in mind, staying close to the
truth is a valid and logical option. Cognitive load may affect the amount of incorrect
information given by liars. Research has shown that people are less likely to lie when
experiencing high cognitive load because they then lack the cognitive resources
required to lie (van ‘t Veer, Stel, & van Beest, 2014). Additionally, being interviewed
in a non-native language is cognitively more demanding than being interviewed in a
native language or through an interpreter. The result could be that the non-native liars interviewed in English would provide a higher proportion of correct information than their counterparts (Hypothesis 5).

**Interviewees’ Own Words versus Interpreters’ Translations**

Ewens et al. (2014) analysed the interpreters’ translations of the interviewees’ spoken words rather than the actual responses spoken by the interviewees themselves. Whilst a small sample of the interviewees’ spoken words was analysed, this was not all of the interviews involving an interpreter. Focusing on the interpreters’ translations is understandable as that is what investigators in real life will understand and rely upon. However, interpreters’ translations are unlikely to be identical to the interviewees’ own words. Interpreters are humans and make errors including editing the answers given by interviewees (Nakane, 2009). Further issues have been raised about the use of incorrect equivalent words and the omitting of details by interpreters (Mulayim, Lai, & Norma, 2014). In this study we compared the interviewees’ own spoken words with interpreters’ translations of those words. We expected interpreters to omit some detail resulting in the interviewees’ own spoken words including more detail than the interpreters’ translations (Hypothesis 6). We also expected interpreters to make mistakes resulting in the interviewees’ responses containing less inaccurate information than the interpreters’ translations (Hypothesis 7).

**Rapport**

Rapport is defined as a harmonious, positive and productive relationship between an interviewer and interviewee (Evans, Houston, & Meissner, 2012; Walsh & Bull, 2012). It is arguably the most critical element of investigative interviewing, (Fein, 2006, Driskell, Blickensderfer, & Salas, 2013), as it facilitates talking and cooperation (Bull & Soukara, 2010; Drolet & Morris, 2000; Macintosh, 2009), and
more accurate recall (Collins, Lincoln, & Frank, 2002; Vallano & Schreiber Compo, 2011). Furthermore, the establishment of rapport has been found to help investigators gain interviewees’ trust which, in turn, facilitates relationship building between interviewers and interviewees (Abbe & Brandon, 2012). It has been argued that, in this way, rapport facilitates an increased and productive interpersonal experience (Abbe & Brandon, 2012).

Fundamental differences, in terms of intimacy, exist between dyadic and triadic interactions (Simmel, 1964) and thus the question arises about the impact an interpreter has on rapport between an interviewer and interviewee. Researchers have found that interviewers can have differing views on the use of interpreters: whilst some suggest interpreters have a negative effect (Soufan, 2011, Russano, Narchet, Kleinman & Meissner, 2014), other interviewers believe that understanding the language, only possible through an interpreter, is a key step in successful rapport building (Russano, Narchet, Kleinman & Meissner, 2014). Interestingly, interpreters themselves believe they can improve rapport because they can give insight into the culture of the interviewee (Russano, Narchet & Kleinman, 2014). In other words, the effect of an interpreter on rapport is difficult to predict. Medical studies (Karliner, Perez-Stable, & Gildengorin, 2004), and laboratory studies (Ewens et al., 2014) found no effect of the presence of an interpreter on the rapport between an interviewer and interviewee. The current study further explored the effect of having an interpreter present during an interview on rapport.

The effect that lying or truth telling has on rapport is a complex picture. Liars can feel guilty about the act of lying or can be afraid of getting caught (Ekman, 1985), and as a result can express more negative affect than truth tellers (DePaulo et al., 2003). Someone who experiences negative affect may perceive the environment in a
negative frame of mind (Jundi, Vrij, Hope, Mann, & Hillman, 2013; Mann et al., 2012), which could result in a negative assessment of the interview setting. However, rapport was not influenced by the act of lying, in the study described in chapter two of this thesis, but appeared to be correlated with factors including experience of the interpreter, age of the interviewee, and interviewees’ motivation (Ewens et al., 2014). Thus, we predicted that liars and truth tellers would experience the same level of rapport with the interviewer (Hypothesis 8).

In terms of how rapport will be affected by the seating position of the interpreter, research has shown that visual access enhances cooperation (Sally, 2000; Drolet & Morris, 2000). The interviewee communicates with the interpreter who they cannot see in the ‘behind the interviewee’ and telephone interpretation conditions. However, in all three interpreter conditions the interviewee can see the interviewer. Since the interviewer is ultimately the person the interviewee wants to convey their information to, there should be no difference in rapport between the interviewer and interviewee between the three interpreter seating position conditions. We explored the effect of interpreter position on rapport between interviewer and interviewee.

Method

Design

This study used a between subjects design with the independent variables being Veracity (truth versus lie) and Interview Condition (Native-English, Interpreter next to interviewer, Interpreter behind interviewee, Telephone interpreter, and Non-Native English without interpreter). The dependent variables were total detail elicited from interviewee, proportion correct detail elicited, cues to deceit (number of detail), interviewee self-reported rapport, and interviewee impression of using an interpreter. Transcripts were coded for correct and incorrect information. Correct detail was
accurately reported information that was contained in the video participants watched, whilst incorrect detail was any inaccurate information reported. The total number of correct and incorrect pieces of information resulted in the total detail score. Detail included all the perceptual details (information about what the examinee saw or heard); spatial details (information about locations or the spatial arrangement of people and/or objects); and temporal details (information about when the event happened or an explicit description of a sequence of events). The proportion of correct detail was the proportion of the total number of details recalled that was correct. The analyses regarding total detail elicited from interviewee and proportion correct detail elicited were conducted twice. The first analyses used the interpreters’ translation of the interviewees’ speech whilst the second set of analyses used the interviewees’ own speech. Cues to deceit were measured by the amount of detail provided and comparing the differences in detail between truth tellers and liars. Rapport was measured via the nine items Interaction Questionnaire (Vallano & Schreiber Compo, 2011). Participants rated the interviewer on 7-point scales ranging from [1] not at all to [7] extremely on nine characteristics. Impressions of the interpreter were measured through a series of questions in a post-interview questionnaire on 7 Likert point scales (1 = not at all to 7 = very much). Questions related to how the interviewee found using an interpreter (this included a combination of positive and negative statements) and how they thought the interruptions affected the interview and the interviewees’ memory.

Participants

A total of 260 participants (81 males and 179 females) took part in the study. They were British (n = 60), Chinese (n = 50), Korean (n = 79) or Hispanic (n = 71). Ages ranged from 18-56 years with an average age of 23.34 years (SD = 6.66 years).
Participation took place in three different universities in the United Kingdom, Republic of Korea and USA. The Chinese sample was collected in the UK and the Hispanic sample was collected in the USA. Participants at all locations consisted of university students and staff. Analyses revealed a similar gender distribution across all five Interview Conditions (Native-English, Interpreter next to interviewer, Interpreter behind interviewee, Telephone interpreter, Non-Native English without interpreter), $X^2(4, 260) = 1.61, p = .81, \Phi = .08$. Age differed between conditions $F(4, 255) = 15.50, p < .001, \eta^2_p = .20$, with Tukey post hoc tests showing that the participants in the English conditions were older than the participants in the non-native English conditions and the three interpreter conditions, see Table 3.1. However, when age was used as a covariate it did not change the findings reported in the Results section regarding Total Detail, Proportion Correct Detail, and Rapport with the interviewer$^4$.

$^4$ The effect of age was not significant for Total Detail, $F(1, 248) = 3.14, p = .078, \eta^2_p = .01$, Percentage Correct Detail, $F(1, 248) = .01, p = .901, \eta^2_p = .00$, and Rapport, $F(1, 248) = 2.46, p = .118, ns, \eta^2 = .01)$. 
Table 3.1

Participant’s age and gender as a function of Interview Condition

<table>
<thead>
<tr>
<th>Interview Condition</th>
<th>Age M</th>
<th>Age SD</th>
<th>Age CI</th>
<th>Gender Male</th>
<th>Gender Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Native English</td>
<td>28.70</td>
<td>11.69</td>
<td>27.17,30.23</td>
<td>28%</td>
<td>72%</td>
</tr>
<tr>
<td>Non-native English</td>
<td>21.84</td>
<td>2.43</td>
<td>201.6,23.52</td>
<td>28%</td>
<td>72%</td>
</tr>
<tr>
<td>Interpreter: Next to</td>
<td>21.52</td>
<td>2.26</td>
<td>19.88,23.16</td>
<td>35%</td>
<td>65%</td>
</tr>
<tr>
<td>Interpreter: Behind</td>
<td>21.80</td>
<td>2.59</td>
<td>20.10,23.49</td>
<td>37%</td>
<td>63%</td>
</tr>
<tr>
<td>Interpreter: Telephone</td>
<td>21.78</td>
<td>2.49</td>
<td>20.08,23.47</td>
<td>29%</td>
<td>71%</td>
</tr>
</tbody>
</table>

Procedure

Participants were recruited via posters, leaflets and online advertisements at three universities. Participants were invited to play the role of a security guard at an intelligence agency and then to attend an interview.

On arrival at the corresponding university, participants were greeted by members of the research team. They were informed that they were going to play the role of a security officer and that they would be viewing video footage from an intelligence agency of a secret meeting. The videos were dubbed over into the appropriate language and participants viewed the video in their native language. All participants completed a pre-interview questionnaire before watching the video, in which they were asked to what extent they were motivated to perform well in the interview on a 5 point scale (1 = not at all motivated to 5 = very motivated). All forms were translated and completed in the native language of the participant.
The meeting. The purpose of the secret meeting was to vote on a suitable location to plant a spy device. All participants were told to watch the footage and that it was essential they remembered as much detail as they could. The meeting comprised of three members, one of whom did all the talking and led the meeting. Firstly, he spoke about the spy device and its technical features. Then he discussed the possible locations for planting the device. These locations included the name of the building, where specifically the device would be planted and why it was a suitable location. Two locations were discussed in full but before the third location could be discussed the leading member had to leave the meeting. The only information given about the third location was the name of the building. This resulted in all members taking a vote on which of the two locations was best to hide the device. The first location was always chosen as the selected site. Three variations of the video were used for counterbalancing. This was achieved by switching the order in which the three possible locations were presented, meaning that the selected site changed. Additionally, the device, which was visible in the video, was physically different in all three videos. The technical features, however, stayed the same. No differences emerged in terms of total detail given by interviewees and proportion correct detail as a function of video (both $F’s < 1.33$, both $p’s > .26$). Once the video had finished the participants were allocated to the truth telling ($n = 132$) or lying ($n = 128$) condition and subsequently given instructions.

Prior to being interviewed, truth tellers were informed that the footage they had just watched had disappeared and that the agency had launched an investigation. The agency believed they had a mole working for them and it was of the upmost importance that the interviewer knew as much detail about the video as they could.
Truth tellers were told to fully cooperate with the interviewer, to be completely truthful and to answer the questions to the best of their knowledge.

Prior to being interviewed, liars were informed that the footage they had just viewed had disappeared and the agency had launched an investigation and needed to know in as much detail as possible what happened in the video. Liars were told it was their responsibility to recall that information in an interview. Liars were told that the intelligence agency believed they had a mole working for them, which could be the interviewer the liars were going to talk to. This meant that liars could not disclose all the information truthfully to the interviewers. Liars were told that the interviewer knew the device was going to be placed somewhere, but that they did not know where. So, above all, liars were told they must not reveal the location that was selected to hide the spy device and their objective was to mislead the interviewer by using the third location mentioned in the video as the location that was selected to plant the device (although this was not the case). The name of the building has been presented in the video but nothing else so the liars needed to invent these details. Liars were also told that they needed to mislead the interviewer about the device. They were told that the interviewer knew something about the device but they did not have all the details, and it was not clear what they knew. Because of this, liars needed to provide some truthful and some false information about the device, which would help them to appear cooperative without having to tell the interviewer everything. It was up to the participants to decide how much truthful and false information they would give.

Both liars and truth tellers were given as much time as they needed before the interview to invent their stories and/or think about what they had seen in the meeting. All participants were told that they must convince the interviewer that they were telling them the truth, and if they did they would receive £7 (or an equivalent amount
in Korea and the US). They were further told that if they could not convince the interviewer, they would be asked to write a report about the meeting. All instructions were given to participants in their native language.

**Interview.** Participants were then brought to the interview room and introduced to the interviewer and, if present, the interpreter. Both interviewer and interpreter were blind to the veracity of the participants. However, the interviewer was not blind to the conditions of the experiment. That is, whether there was an interpreter present or not. Two British female interviewers were used for all interviews and spoke English during the interviews. The interviewers were instructed to keep an open posture but to avoid displaying any expressiveness, as being supportive or sceptical can influence participant’s responses during an interview (Mann et al., 2012). Both interviewers had vast experience in interviewing native English and non-native English participants in research studies, and were also used as interviewers for the studies described in Ewens et al. (2014) and Vrij, Granhag, Mann, & Leal (2011).

In total, six interpreters were used in the study: Chinese ($n = 2$), Korean ($n = 2$) and Hispanic ($n = 2$). We approached several people with fluent bilingual skills (native language and English) and asked them for their willingness to take part in the study as an interpreter. Two of them were professional interpreters. The interpreters were requested to speak in the first person and to give a complete account of the interviewee’s response [to the best of their ability] after the interviewee had finished answering each question. They were allowed and encouraged to take notes when the interviewee spoke. The interpreters were asked to rate their level of proficiency in their second language (English) on a scale ranging from $[0]$ none to $[10]$ perfect. They also rated their speaking and understanding proficiency for their languages they were going to translate. All interpreters gave themselves a score of 8 or above for both
speaking and understanding spoken language. Thus, the interpreters indicated that they had a very good understanding of the language they were interpreting. This was also the view of the participants. After the interviews, participants were asked whether or not they understood the interpreter when the interpreter translated their answers into English. They were also asked to rate, on a 7-point Likert scales from (1) not at all to (7) very much, to what extent the interpreter translated their answers in full. Of those who reported that they could understand the interpreter (110 out of 150 participants), 10% \((n = 11)\) did not think that the interpreter translated their answers in full (3 or lower on the 7-point Likert scale), whereas 74% thought that they did translate their answers in full (5 or higher on the 7-point Likert scale). This combination of interpreters’ self-reported high expertise and participants’ judgements that the interpreters translated their answers accurately suggests that the interpreters translated the participants’ answers in a satisfactory manner. In addition, we examined whether assessment of the interpreter’s skills influenced the amount of information provided, we compared the 11 participants who did not think that the interpreter translated their answers in full with the remaining 99 participants who were satisfied with the interpretations. No difference was found in the total amount of detail provided between these 11 participants \(M = 28.73, SD = 12.82, 95\% \text{ CI} [20.22, 37.23]\) and the remaining participants \(M = 32.78, SD = 14.38, 95\% \text{ CI} [29.94, 35.61], F(1, 108) = .801, p = .373, d = 0.30, 95\% \text{ CI} [-.34, .91]\).

Participants at each university were randomly allocated to one of three different interpreter seating conditions, and the interpreters were equally distributed amongst these three seating positions. The interpreter either sat next to the interviewer (thus both interpreter and interviewer were facing the interviewee) \((n = 52)\), behind the interviewee (thus both interpreter and interviewee were facing the interviewer \(n = \)
49]), or interpreted via the telephone, with interviewer and interviewee facing each other alone in a room (n = 49). Each interpreter conducted interviews in each seating condition.

The study included two further conditions that did not have an interpreter present. One condition (native English) consisted of native English speaking participants (n = 60) who were interviewed in English. These participants were recruited via the university in the UK. The other condition (non-native English) consisted of Chinese, Korean and Hispanic native speakers (n = 50) who were interviewed in English (and answered in English). These participants were recruited at the UK, Korean and US universities respectively. In the non-native English condition, all participants spoke English well enough to ensure they would be able to get by in the interview speaking English without an interpreter, as judged by the research assistants. The non-native languages were equally distributed across the non-native English and interpreter conditions, ensuring that language did not affect the non-native conditions. Inclusion criteria were used for only one condition: The native English condition consisted of participants whose first language was English.

To make the interviewee feel comfortable and to avoid floor effects in establishing rapport interviewees were offered a glass of water from the interviewer, as offering something helps rapport building (reciprocation principle, Cialdini, 2007). The interview contained five questions. Question 1: “I’d like to start with you recalling what happened during the meeting. That is, starting from the moment the video started; please describe to me what happened from that point onwards until the end of the meeting?”; Question 2: “I would like you to describe what it looked like from the inside, including the exact location where the device would be planted?”; Question 3: “Why was this site thought to be suitable?”; Question 4: “Moving on to
the device, first I would like you to describe for me what the device looked like, that is, all of its physical features?”; Question 5: “Now, please can you tell what the device can do, that is, all of its technical features?” See Appendix 2 for full interview schedule.

**Post-Interview Questionnaire.** After the interview, participants completed a post-interview questionnaire, which measured likelihood of receiving £7 (or the equivalent) and likelihood of writing a statement, which were measured on 7 Likert point scales (1 = not at all to 7 = totally). Rapport was measured via the nine items Interaction Questionnaire (Vallano & Schreiber Compo, 2011). Participants rated the interviewer on 7-point scales ranging from [1] not at all to [7] extremely on nine characteristics such as ‘smooth’, ‘bored’, ‘engrossed’, and ‘involved’ (Cronbach’s alpha = .81).

Participants in the three interpreter conditions were further asked a number of questions on 7 Likert point scales (1 = not at all to 7 = very much) regarding their experience with the interpreter and interruptions. Although we predicted that interviewees would rate the presence of an interpreter negatively, we included negative and positive experiences in the questionnaire so that we could explore the full range of experiences and avoided a negative bias. The participants were asked how annoying, pleasant, distracting, disturbing and relaxing the interruptions in the interpretation were; whether the interruptions made the interview (i) easier, or (ii) more difficult and whether the interruptions made it (i) easier, or (ii) more difficult to remember what happened in the meeting they had viewed on the video. Participants were also asked whilst the interpreter spoke whether they thought about (i) what to say next, or (ii) what happened in the meeting. Participants in the three interpreter conditions were finally asked, on a 7-point Likert scale ranging from (1) less to (7)
more, whether they thought they would say less or more if they had been interviewed without an interpreter.

The interviews were video and audio recorded and the English speech in the audiotapes was subsequently transcribed for all interviews. Additionally, the non-English speech from those who spoke through an interpreter was transcribed and translated into English for coding. Thus the results contain two types of detail in the interpreters’ conditions: ‘Detail through the interpreter’: The speech from the interpreter was used to code detail; and ‘Detail in own native language’: The speech from the interviewee was used to code detail.

**Coding**

**Total detail, correct detail and incorrect detail.** The transcripts were read and each of the responses to the five questions was coded for number of details. Detail included all the perceptual details (information about what the interviewee saw or heard); spatial details (information about locations or the spatial arrangement of people and/or objects); and temporal details (information about when the event happened or an explicit description of a sequence of events). Detail was split into correct and incorrect detail. In order to complete this piece of coding, the coder was made aware of the content of the three versions of the video. Correct detail was any accurately reported detail from the video, whilst incorrect detail was any inaccurate information reported. If interviewees provided incorrect detail but then changed their account to correct information the incorrect information was not included in the coding. A second coder coded a random sample of 50 transcripts. Inter-rater reliability between the two coders was excellent for total detail (ICC = .96), correct detail (ICC = .96), and incorrect detail (ICC = .99). In the Results section we report two types of detail: Total Detail and Proportion Correct Detail. Total Detail refers to everything the
participant said and Proportion Correct Detail is the proportion of the total number of details recalled that was correct. Thus if a participant provided 90 correct details and 10 incorrect details, the Total Detail score would be 100 and the Proportion Correct Detail score would be .90.

Grasp of English. Three coders rated English proficiency of the participants in the non-native English condition (non-natives speaking English with no interpreter) by listening to the interviews and using an English language training scheme scale from Embassy English. The scale consists of five categories: [1] Beginner (those who know a few English words i.e., hello, taxi, football), [2] Elementary (those who can communicate in a basic way/can make simple sentences, reply to questions on a range of personal and common subjects, talk about likes and dislikes, family and routines), [3] Pre-Intermediate (those with a good basic ability to communicate and understand many subjects and give opinions, grammar includes understanding of adjectives, adverbs, comparatives and basic prepositions), [4] Intermediate (those who have the grammar to talk about a wide number of subjects, have some understanding of tone and style, can confidently make sentences, question forms and clauses), and [5] Upper-Intermediate (those who can talk fluently and almost completely accurately). A reliability analysis revealed that the agreement between coders was very good (Cronbach’s $\alpha = .87$). When there was a disagreement between the three coders, two coders gave the same ratings and the third coder was an outlier. In such situations, we used the classification made by the two coders who agreed. The interviewees were classified as Beginner (0%), Elementary (32%), Pre-Intermediate (42%), Intermediate (26%), and Upper-Intermediate (0%). We recruited participants with varying levels of English proficiency as this reflects real life.
Additionally, all non-native participants were asked to indicate, via a yes/no response, if they would request an interpreter in a police interview in an English-speaking country. In the non-native English condition (without an interpreter) 69% would have requested an interpreter, whereas in the interpreter conditions 65% would have requested an interpreter. Those findings did not differ between these groups, $X^2(1, 194) = .22, p = .64, \Phi = .03$.

In the post-interview questionnaire non-native English participants were asked to rate their English proficiency on the same scale outlined above. Participants in the non-native English condition (without an interpreter) classified themselves as Beginner (0%), Elementary (16%), Pre-Intermediate (40%), Intermediate (32%) and Upper-Intermediate (12%). Those in the interpreter conditions classified themselves as Beginner (7%), Elementary (30%), Pre-Intermediate (16%), Intermediate (15%), and Upper-Intermediate (32%). These two distributions differed from each other, $X^2(4, 198) = 27.01, p < .001, \Phi = .37$. The main difference between the two distributions is that in the non-interpreter condition, many participants spoke English at a Pre-Intermediate or Intermediate level. This represents real life. Those who speak beginner English cannot be interviewed without an interpreter because their English is not good enough to convey information in English. Those who speak English at an Upper-Intermediate level probably do not even consider using an interpreter during their interviews (and may not be offered one). It is thus the middle groups for whom the choice to use an interpreter is most valid and, consequently, for whom the comparison between being interviewed with or without an interpreter becomes most relevant. The correlation between non-native English participants self-reported proficiency ratings and three coders proficiency ratings was, $r(50) = .45, p = .001$. 
Results

In the Results section we discuss three sets of analyses. In the first analyses we discuss the total detail and total proportion of correct detail given by (i) the native English participants, (ii) the non-native participants who spoke in English, and (iii, iv, v) the interpreters’ translations of the interviewee’s speech in the three interpreter conditions (Interpreter next to interviewer, Interpreter behind interviewee, and Telephone interpreter). This is an important analysis as this is the speech content that the interviewer heard in the interviews. We labelled these analyses ‘through the interpreter’ in the text below. However, the actual content spoken by the interviewee may differ from the interpreter’s translations. Therefore, in a second set of analyses, we discuss the total detail and proportion of correct details given by (i) the native English participants, (ii) the non-native participants who spoke in English, and (iii, iv, v) the actual speech content of the interviewees in their own language. We labelled this analyses ‘Interviewee in own native language’ in the text below. We also report a third set of analyses in which we directly compared the content of the responses given by interviewees in their native language and the translation’s by the interpreters of those responses by introducing these two types of information as a within-subjects factor. The native English participants and non-native participants who spoke in English were removed for the third set of analyses.

Motivation, Likelihood of Receiving an Incentive and Receiving a Penalty

Three 2 (Veracity: truth or lie) X 5 (Interview Condition: Native-English, Interpreter next to interviewer, Interpreter behind interviewee, Telephone interpreter, Non-Native English without interpreter) ANOVAs were conducted on the three manipulation checks. Motivation revealed a significant Interview Condition effect, $F(4, 250) = 5.31, p < .001, \eta^2_p = .08, 95\% CI [.02,.14]$. Tukey post hoc tests revealed
that native-English participants were significantly more motivated than the non-native English participants (with no interpreter) and those who were interviewed with the interpreter behind the interviewee. The native-English speaking participants did not differ in their motivation from those who were interviewed with an interpreter who sat next to the interviewer and those in the telephone interpreter condition, see Table 3.2. The non-native English (without interpreter) condition and the three interpreter conditions did not differ from each other.

Table 3.2

*Participant’s motivation and estimated likelihood of receiving an incentive as a function of Interview Condition*

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>SD</th>
<th>CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motivation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Native English</td>
<td>4.22</td>
<td>.69</td>
<td>4.04,4.40</td>
</tr>
<tr>
<td>Non-native English</td>
<td>3.60</td>
<td>.67</td>
<td>3.40,3.80</td>
</tr>
<tr>
<td>Interpreter: Next to</td>
<td>3.88</td>
<td>.76</td>
<td>2.69,4.08</td>
</tr>
<tr>
<td>Interpreter: Behind</td>
<td>3.78</td>
<td>.74</td>
<td>3.58,3.99</td>
</tr>
<tr>
<td>Interpreter: Telephone</td>
<td>3.96</td>
<td>.71</td>
<td>3.70,4.11</td>
</tr>
<tr>
<td>Likelihood of receiving an incentive</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Native English</td>
<td>4.02</td>
<td>1.30</td>
<td>3.67,4.37</td>
</tr>
<tr>
<td>Non-native English</td>
<td>4.16</td>
<td>1.36</td>
<td>3.75,4.51</td>
</tr>
<tr>
<td>Interpreter: Next to</td>
<td>4.52</td>
<td>1.51</td>
<td>4.15,4.89</td>
</tr>
<tr>
<td>Interpreter: Behind</td>
<td>4.90</td>
<td>1.37</td>
<td>4.55,5.32</td>
</tr>
<tr>
<td>Interpreter: Telephone</td>
<td>4.69</td>
<td>1.57</td>
<td>4.30,5.07</td>
</tr>
</tbody>
</table>
The Veracity main effect, $F(1, 250) = .16, p = .688, \eta^2 = .04, 95\% CI [-.21, .28]$, and Veracity X Interview Condition interaction effect were not significant, $F(4, 250) = .62, p = .646, \eta^2 = .01, 95\% CI [.00, .03]$. The grand mean score ($M = 3.89, SD = .75$ on a 5-point scale) revealed that the participants were motivated to perform well during the interview. When motivation was used as a covariate in the Total Detail and Proportion Correct Detail analyses it did not change the findings reported in the Results section regarding Total Detail and Proportion Correct Detail$^5$.

The likelihood of receiving an incentive of £7 (or equivalent) resulted in significant main effects for Veracity, $F(1, 250) = 21.06, p < .001, \eta^2 = .55, 95\% CI [.30, .80]$, and Interview Condition, $F(4, 250) = 4.09, p = .003, \eta^2 = .06, 95\% CI [.01, .11]$. Truth tellers ($M = 4.82, SD = 1.39, 95\% CI [4.61, 5.06]$) were more convinced that they would receive the incentive than liars ($M = 4.05, SD = 1.41, 95\% CI [3.83, 4.30]$). Furthermore, the participants in the native English condition were less convinced they would receive the incentive than those in the ‘interpreter behind interviewee’ condition, see Table 3.2. No other differences between Interview Conditions emerged. The Veracity X Interview Condition interaction effect, $F(4, 250) = .70, p = .595, \eta^2 = .01, 95\% CI [.00, .03]$, was not significant. When the likelihood of receiving an incentive was used as a covariate in the Total Detail and Proportion Correct Detail analyses it did not change the findings reported in the Results section regarding Total Detail and Proportion Correct Detail$^6$.

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$^5$The effect of motivation was not significant for Total Detail, $F(1, 248) = .68, p = .411, \eta^2 = .003, 95\% CI [.00, .03]$ and Percentage Correct Detail, $F(1, 248) = .01, p = .91, \eta^2 = .000, 95\% CI [.00, .00]$.

$^6$The effect of the likelihood to receive an incentive was not significant for the Percentage Correct Detail, $F(1, 248) = .07, p = .79, \eta^2 = .00, 95\% CI [.00, .01]$, but
The ANOVA regarding receiving a penalty of writing a statement revealed a significant Veracity effect, $F(1, 250) = 9.89, p = .002, d = 0.41, 95\% CI [.16, .65]$. Liars thought the likelihood of writing a statement was significantly higher ($M = 4.38, SD = 1.26, 95\% CI [4.11, 4.61]$) than truth tellers ($M = 3.80, SD = 1.54, 95\% CI [3.56, 4.05]$). The Interview Condition main effect, $F(4, 250) = .49, p = .743, \eta^2_p = .01, 95\% CI [.00, .02]$ and the Veracity X Interview Condition interaction effect, $F(4, 250) = .950, p = .436, \eta^2_p = .02, 95\% CI [.00, .04]$, were not significant.

**Interview length**

A 2 (Veracity) X 5 (Interview Condition; Native-English, Interpreter next to interviewer, Interpreter behind interviewee, Telephone interpreter, Non-Native English without interpreter) analysis was carried out with interview length as the dependent variable. The analysis revealed significant Veracity, $F(1, 250) = 36.02, p < .001, d = 0.60, 95\% CI [.35, .85]$, and Interview Condition main effects, $F(4, 250) = 31.29, p < .001, \eta^2_p = .33, 95\% CI [.23, .41]$. The truthful interviews ($M = 15$ minutes and $35.64$ seconds, $SD = 371.94$ seconds, $95\% CI [905.41, 996.82]$) were significantly longer than the deceptive interviews ($M = 12$ minutes and $21.20$ seconds, $SD = 266.64, 95\% CI [706.03, 798.97]$). Tukey post hoc tests revealed that the native-English interviews ($M = 9$ minutes and $2.60$ seconds, $SD = 172.39, 95\% CI [475.05, 610.15]$) were significantly shorter than the ‘Interpreter next to interviewer’ ($M = 16$ minutes and $4.48$ seconds, $SD = 313.07, 95\% CI [891.92, 1037.04]$), ‘Interpreter behind interviewee’ ($M = 16$ minutes and $30.90$ seconds, $SD = 319.17, 95\% CI$ was significant for Total Detail, $F(1, 248) = 4.32, p = .039, \eta^2_p = .02, 95\% CI [.00, .06]$. 

89
(923.63, 1073.40), telephone interpreter (M = 16 minutes and 40.76 seconds, SD = 314.54, 95% CI [919.72, 1069.49]) and the ‘Non-native English without interpreter’ (M = 12 minutes and 40.56 seconds, SD = 299.39, 95% CI [684.60, 833.06]) interviews. Furthermore, the non-native English interviews were significantly shorter than the three interpreter conditions. The three interpreter conditions did not differ in duration. There was no significant Veracity X Interview Condition effect, F(4, 250) = 2.20, p = .070, $\eta^2_p = .03$, 95% CI [.00,.07].

**Total Detail through the Interpreter (Hypotheses 1, 3 and 4)**

A 2 (Veracity) X 5 (Interview Condition) ANOVA was conducted on Total Detail (interpreter’s speech content). The Ms and SDs related to the Interview Condition factor are provided in Table 3.3. The analysis revealed significant main effects for Veracity, F(1, 250) = 74.18, p < .001, $d = 0.95$, 95% CI [.69,1.20], and Interview Condition, F(4, 250) = 19.79, p < .001, $\eta^2_p = .24$, 95% CI [.15,.32]. Truth tellers provided more detail (M = 45.58, SD = 17.89, 95% CI [42.62, 47.42]) than liars (M = 30.43, SD = 13.61, 95% CI [27.62, 32.50]). Furthermore, participants in the native-English condition provided more detail than participants in the non-native English without an interpreter, interpreter next to interviewer, interpreter behind interviewee and telephone interpreter conditions, supporting Hypothesis 1 that more detail would be provided in interviews where the interviewer and interviewee shared their native language than in interviews where interviewees speak in a non-native language or through interpreters. The latter four groups did not differ in detail, which means that Hypothesis 3 was not supported. That is, it was not the case that the next to the interviewer seating position for the interpreter would elicit more information from interviewees than the sitting behind the interviewee position and telephone interpretation. The Veracity X Interview Condition interaction effect was not
significant, \( F(4, 250) = 1.67, p = .158, \eta^2 = .03, 95\% CI [.00,.06] \). The absence of a Veracity X Interview Condition interaction effect suggests that truth tellers provided more detail than liars in all five Interview Conditions. This was indeed the case (all \( F \)'s > 5.48, all \( p \)'s < .025, all d-scores ranged from \( d = 0.68 \) [telephone condition] to \( d = 1.60 \) [next to condition]). Hypothesis 4 was not supported. That is, it was not the case that truth tellers would be more detailed than liars, particularly in the interviews without an interpreter.
Table 3.3

*Detail spoken through the interpreter findings as a function of veracity and interview condition*

<table>
<thead>
<tr>
<th></th>
<th>Truth</th>
<th>Lie</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>CI</td>
</tr>
<tr>
<td>Total detail through the interpreter</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Native English</td>
<td>62.67</td>
<td>18.01</td>
<td>56.48,68.86</td>
</tr>
<tr>
<td>Non-native English</td>
<td>40.88</td>
<td>15.22</td>
<td>35.31,46.97</td>
</tr>
<tr>
<td>Interpreter: Next to</td>
<td>40.34</td>
<td>11.92</td>
<td>36.87,44.52</td>
</tr>
<tr>
<td>Interpreter: Behind</td>
<td>42.70</td>
<td>16.07</td>
<td>37.30,48.09</td>
</tr>
<tr>
<td>Interpreter: Telephone</td>
<td>35.80</td>
<td>15.11</td>
<td>33.16,43.84</td>
</tr>
<tr>
<td>Proportion correct detail through the interpreter</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Native English</td>
<td>.94</td>
<td>.04</td>
<td>.91,.98</td>
</tr>
<tr>
<td>Non-native English</td>
<td>.84</td>
<td>.15</td>
<td>.81,.88</td>
</tr>
<tr>
<td>Interpreter: Next to</td>
<td>.85</td>
<td>.07</td>
<td>.82,.89</td>
</tr>
<tr>
<td>Interpreter: Behind</td>
<td>.87</td>
<td>.11</td>
<td>.83,.90</td>
</tr>
<tr>
<td>Interpreter: Telephone</td>
<td>.89</td>
<td>.06</td>
<td>.86,.93</td>
</tr>
</tbody>
</table>
Proportion Correct Detail through the Interpreter (Hypothesis 5)

A 2 (Veracity) X 5 (Interview Condition) ANOVA with proportion correct detail as dependent variable revealed a main effect for Veracity, $F(1, 250) = 356.83$, $p < .001$, $d = 2.36$, 95% CI [2.02, 2.65], with truth tellers ($M = .88$, $SD = .10$, 95% CI [.86, .91]) providing a higher proportion of correct detail than liars ($M = .55$, $SD = .18$, 95% CI [.53, .58]). Although the Interview Condition effect was not significant, $F(4, 250) = 1.18$, $p = .321$, $\eta^2_p = .02$, 95% CI [.00, .05], the Veracity X Interview Condition interaction effect was significant, $F(4, 250) = 2.78$, $p = .028$, $\eta^2_p = .04$, 95% CI [.00, .09].

The Ms and SDs related to this interaction are provided in Table 3.3. Tukey post hoc tests revealed that truth tellers in the native-English condition provided a higher proportion of correct details than truth tellers in the non-native English without interpreter condition, the interpreter next to interviewer condition, and interpreter behind interviewee condition, but a similar proportion of correct detail as participants in the telephone interpreter condition. The other four groups did not differ significantly from each other. For liars, no difference emerged between any of the conditions, which meant that Hypothesis 5 was rejected. That is, it was not the case that non-native liars interviewed in English without an interpreter would provide a higher proportion of correct information.

Total Detail given by Interviewee in Own Native Language (Hypotheses 1, 3 and 4)

A 2 (Veracity) X 5 (Interview Condition: Interview Condition; Native-English, Interpreter next to interviewer, Interpreter behind interviewee, Telephone interpreter, Non-Native English without interpreter) ANOVA was conducted on Total Detail (interviewee’s text). The Ms and SDs related to the Interview Condition factor are
provided in Table 3.4. The analysis revealed significant main effects for Veracity, $F(1, 248) = 83.30, p < .001, d = 1.06, 95\% CI [1.58,2.17]$, and Interview Condition, $F(4, 248) = 10.60, p < .001, \eta^2_p = .15, 95\% CI [.06,.22]$. Truth tellers provided more detail ($M = 49.71, SD = 18.00, 95\% CI [46.74, 51.94]$) than liars ($M = 32.51, SD = 14.14, 95\% CI [29.52, 34.81]$). Furthermore, Tukey post hoc tests revealed that participants in the native-English condition provided more detail than participants in the non-native English without an interpreter, interpreter next to interviewer, interpreter behind interviewee and telephone interpreter condition, supporting Hypothesis 1 that more detail would be provided in interviews where the interviewer and interviewee shared their native language than in interviews where interviewees speak in a non-native language or through interpreters. The latter four groups did not differ in detail, which means that Hypothesis 3 was not supported. That is, it was not the case that the next to the interviewer seating position for the interpreter would elicit more information from interviewees than the sitting behind the interviewee position and telephone interpretation. The Veracity X Interview Condition interaction effect was not significant, $F(4, 248) = 1.45, p = .218, \eta^2_p = .02, 95\% CI [.00,.06]$. The absence of a Veracity X Interview Condition interaction effect again suggests that truth tellers provided more detail than liars in all five Interview Conditions, which was indeed the case (all $F$’s $> 7.31$, all $p$’s $< .009$, all d-scores ranged from $d = 0.77$ [non-native English condition without an interpreter] to $d = 1.72$ [interpreter next to interviewer condition]). Hypothesis 4 was not supported. That is, it was not the case that truth tellers would be more detailed than liars, particularly in the interviews without an interpreter.
Table 3.4

*Interviewee in own native language findings as a function of veracity and interview condition*

<table>
<thead>
<tr>
<th></th>
<th>Truth</th>
<th>Lie</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$M$</td>
<td>$SD$</td>
<td>CI</td>
</tr>
<tr>
<td>Total detail of interviewee in own native language</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Native English</td>
<td>62.67</td>
<td>18.01</td>
<td>57.26,68.08</td>
</tr>
<tr>
<td>Non-native English</td>
<td>40.89</td>
<td>15.22</td>
<td>35.19,46.59</td>
</tr>
<tr>
<td>Interpreter: Next to</td>
<td>48.38</td>
<td>13.91</td>
<td>42.57,54.20</td>
</tr>
<tr>
<td>Interpreter: Behind</td>
<td>49.65</td>
<td>18.80</td>
<td>43.47,55.83</td>
</tr>
<tr>
<td>Interpreter: Telephone</td>
<td>45.12</td>
<td>16.87</td>
<td>39.19,51.04</td>
</tr>
<tr>
<td>Proportion correct of interviewee in own native language</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Native English</td>
<td>.94</td>
<td>.04</td>
<td>.89,99</td>
</tr>
<tr>
<td>Non-native English</td>
<td>.84</td>
<td>.15</td>
<td>.79,90</td>
</tr>
<tr>
<td>Interpreter: Next to</td>
<td>.90</td>
<td>.08</td>
<td>.85,96</td>
</tr>
<tr>
<td>Interpreter: Behind</td>
<td>.87</td>
<td>.10</td>
<td>.81,93</td>
</tr>
<tr>
<td>Interpreter: Telephone</td>
<td>.92</td>
<td>.06</td>
<td>.87,98</td>
</tr>
</tbody>
</table>
We correlated the detail given by the interpreter (interpreter translation) and the detail given by the interviewee (interviewees’ own speech). The correlation revealed a significant overlap between the detail in the interpreters’ translation and the interviewees own speech ($r = .93$). This indicates that the detail given by the interpreter gave a good indication of the details provided by the interviewees.

**Proportion Correct Detail given by Interviewee in Own Native Language (Hypothesis 5)**

A further 2 (Veracity) X 5 (Interview Condition) ANOVA was conducted with proportion correct detail (using the interviewees own speech in the interpreter conditions) as dependent variable. Analyses revealed a significant main effect for Veracity, $F(1, 248) = 373.73, p < .001, d = 2.40, 95\% CI [2.08,2.73]$, with truth tellers ($M = .90, SD = .10, 95\% CI [.87, .92]$) providing a higher proportion of correct detail than liars ($M = .55, SD = .18, 95\% CI [.53, .58]$). The Interview Condition effect, $F(4, 248) = 1.96, p = .101, \eta^2_p = .03, 95\% CI [.00,.07]$, and Veracity X Interview Condition interaction effect, $F(4, 248) = 1.82, p = .125, \eta^2_p = .03, 95\% CI [.00,.07]$, were not significant.

To examine whether the above discussed differences between truth tellers’ conditions in providing correct information when analysing the interpreter’s translations were caused by the additional errors made by the interpreters, we carried out a one-way ANOVA for truth tellers with Interview Condition as factor and proportion correct details of the interviewee in their own language as dependent variable. The analysis revealed a significant effect, $F(1, 131) = 4.87, p = .001, \eta^2_p = .13, 95\% CI [.00,.12]$. Tukey post-hoc tests revealed that truth tellers in the native-English condition provided more correct detail than truth tellers in the non-native English without an interpreter condition and the interpreter behind the interviewee
condition, with no other effects emerging (see Table 3.4 for the Ms, SDs and CIs).
The significant difference between the native-English condition and the interpreter next to the interviewee condition, in the correct detail analysis reported above when using the interpreter translation, was no longer significant when we used the interviewee’s own speech. This supports the idea that differences in correct information provided by native speakers and those interviewed with an interpreter are, in part, caused by the mistakes made by the interpreters.

A one-way ANOVA for liars with Interview Condition as factor and proportion correct details of the interviewee in their own language as dependent variable revealed a non-significant effect, $F(1, 127) = 1.05, p = .386, \eta_p^2 = .03, 95\% CI [.00,.06]$. This means that Hypothesis 5 was rejected. That is, it was not the case that the non-native liars interviewed in English would provide a higher proportion of correct information.

We further correlated the proportion of correct detail given by the interpreter and the proportion of correct detail given by the participant themselves. The correlation revealed a significant overlap ($r = .96$).

**Comparison between Total Details Given in Interpreter Responses and Interviewee Responses (Hypothesis 6)**

A Mixed ANOVA was conducted with Type of Response (Interpreter Responses vs Interviewee Responses) as the Within-subjects factor and Veracity and Interpreter Condition as the Between-subjects factors. In this analysis only the three interpreter conditions were included. There was a significant main effect for Type of Response, $F(1, 142) = 118.62, p = < .001, d = 0.35, 95\% CI [.12,.58]$. Interviewees gave more detail in their own response ($M = 38.73, SD = 16.91, 95\% CI [36.46, 41.16]$) than was included in the interpreters’ responses ($M = 33.23, SD = 14.17, 95\% CI [.00,.06]$).
CI [31.31, 35.33]), supporting Hypothesis 6. There was also a significant main effect for Veracity, \( F(1, 142) = 54.26, p < .001, d = 1.19, 95\% CI [.78,1.47] \), with truth tellers \((M = 43.94, SD = 15.24, 95\% CI [40.98, 46.99])\) giving more detail than liars \((M = 28.02, SD = 11.19, 95\% CI [25.13, 31.15])\). The main effect for Interpreter Condition was not significant, \( F(2, 142) = .31, p = .733, \eta_p^2 = .00, 95\% CI [.00,.04] \).

The Type of Response X Veracity interaction effect was significant, \( F(1, 142) = 15.37, p < .001, \eta_p^2 = .10, 95\% CI [.02,.20] \). For the interpreters’ responses, truth tellers \((M = 40.19, SD = 14.26, 95\% CI [36.89, 43.49])\) provided more detail than liars \((M = 26.26, SD = 10.12, 95\% CI [23.92, 28.62])\), \( F(1, 146) = 46.92, p < .001, d = 1.13, 95\% CI [.79,.1.49] \), and the same occurred for the interviewees’ responses (truth tellers \((M = 47.68, SD = 16.23, 95\% CI [43.92, 51.44])\) vs liars \((M = 29.78, SD = 12.25, 95\% CI [26.95, 32.62])\), \( F(1, 146) = 57.30, p < .001, d = 1.24, 95\% CI [.89,1.60] \). The \( d \) scores revealed that the truth/lie difference was more pronounced for the interviewees’ responses \((d = 1.24)\) than the interpreters’ responses \((d = 1.13)\). The Type of Response X Interpreter interaction effect, \( F(2, 142) = .26, p = .771, \eta_p^2 = .00, 95\% CI [.00,.03] \), and Type of Response X Interpreter Condition X Veracity interaction effect, \( F(2, 142) = .01, p = .99, \eta_p^2 = .00, 95\% CI [.00,.00] \), were not significant.

**Comparison between Proportion Correct Details for Interpreter Responses and Interviewee Responses (Hypothesis 7)**

A further mixed ANOVA was conducted with Type of Response (Interpreter Responses vs Interviewee Responses) as the Within-subjects factor and Veracity and Interpreter Condition as the Between-subjects factors but with Proportion Correct Details as the dependent variable. Again, only the three interpreter conditions were included. Analyses revealed a significant main effect for Response Type, \( F(1, 142) =
4.32, \( p = .039, d = .10, 95\% CI [-.16,.30] \), with a higher proportion of correct detail found in the interviewee’s responses (\( M = .74, SD = .21, 95\% CI [.71, .76] \)) than in the interpreters’ responses (\( M = .72, SD = .20, 95\% CI [.70, .75] \)), supporting Hypothesis 7. There was also a significant main effect for Veracity, \( F(1, 142) = 198.35, p < .001, d = 2.30, 95\% CI [1.76,2.57] \), with truth tellers (\( M = .89, SD = .08, 95\% CI [.85, .92] \)) providing a higher proportion of correct detail than liars (\( M = .57, SD = .18, 95\% CI [.55, .61] \)). The main effect for Interpreter Condition was not significant, \( F(2, 142) = .76, p = .471, \eta^2_p = .01, 95\% CI [.00,.06] \).

The Type of Response X Veracity interaction effect was significant, \( F(1, 142) = 4.02, p = .047, \eta^2_p = .03, 95\% CI [.00,.10] \). For the interpreters’ responses, truth tellers (\( M = .87, SD = .08, 95\% CI [.83, .90] \)) provided a higher proportion of correct detail than liars (\( M = .57, SD = .18, 95\% CI [.54, .61] \)), \( F(1, 146) = 174.19, p < .001, d = 2.15, 95\% CI [1.77,2.59] \). The same occurred for the interviewees’ responses (truth tellers (\( M = .90, SD = .08, 95\% CI [.87, .93] \)) vs liars (\( M = .58, SD = .18, 95\% CI [.54, .61] \)), \( F(1, 146) = 196.21, p < .001, d = 2.30, 95\% CI [1.88,2.72] \). The \( d \) scores revealed that the truth/lie difference was more pronounced for the interviewees’ responses (\( d = 2.30 \)) than for the interpreters’ responses (\( d = 2.15 \)). The Type of Response X Interpreter Condition, \( F(2, 142) = .79, p = .458, \eta^2_p = .01, 95\% CI [.00,.06] \), Veracity X Interpreter Condition, \( F(2, 142) = .05, p = .947, \eta^2_p = .00, 95\% CI [.00,.01] \), and Type of Response X Interpreter Condition X Veracity interaction effects, \( F(2, 142) = 1.11, p = .33, \eta^2_p = .02, 95\% CI [.00,.07] \), were not significant.

Impression of Using an Interpreter (Hypothesis 2)

A 2 (Veracity) X 3 (Interview Condition) MANOVA was conducted with the variables listed in Table 3.5 as dependent variables. In this analysis only the three interpreter conditions were included. At a multivariate level, the MANOVA revealed
no significant effects for Veracity, Wilks’ $\lambda = .89 \ F(12, 133) = 1.54, p = .119, \eta_p^2 = .12$, Interview Condition, Wilks’ $\lambda = .85, \ F(24, 266) = .98, p = .494, \eta_p^2 = .08$, or Veracity X Interview Condition, Wilks’ $\lambda = .87, \ F(24, 266) = .84, p = .686, \eta_p^2 = .07$.

At a univariate level, only one out of the 36 effects was significant which could be expected by chance. Hence, the variables listed in Table 3.5 were not influenced by Veracity or the position of the interpreter.
Table 3.5

Participants’ impressions of the interpreter (all three interpreter conditions and two veracity conditions combined).

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>1-3 (disagree)</th>
<th>5-7 (agree)</th>
<th>r with total detail</th>
</tr>
</thead>
<tbody>
<tr>
<td>I found the interpreter interrupting my speech:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annoying (1 [no] – 7 [yes])</td>
<td>1.65</td>
<td>.96</td>
<td>93%</td>
<td>1%</td>
<td>-.072</td>
</tr>
<tr>
<td>Pleasant (1 [no] – 7 [yes])</td>
<td>3.79</td>
<td>1.67</td>
<td>39%</td>
<td>25%</td>
<td>.092</td>
</tr>
<tr>
<td>Distracting (1 [no] – 7 [yes])</td>
<td>2.09</td>
<td>1.27</td>
<td>83%</td>
<td>5%</td>
<td>.065</td>
</tr>
<tr>
<td>Disturbing (1 [no] – 7 [yes])</td>
<td>2.07</td>
<td>1.30</td>
<td>82%</td>
<td>4%</td>
<td>.079</td>
</tr>
<tr>
<td>Relaxing (1 [no] – 7 [yes])</td>
<td>4.31</td>
<td>1.84</td>
<td>33%</td>
<td>39%</td>
<td>.075</td>
</tr>
<tr>
<td>The interruptions by the interpreter made the interview:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Easier (1 [no] – 7 [yes])</td>
<td>4.09</td>
<td>1.85</td>
<td>29%</td>
<td>35%</td>
<td>-.023</td>
</tr>
<tr>
<td>More difficult (1 [no] – 7 [yes])</td>
<td>2.35</td>
<td>1.48</td>
<td>77%</td>
<td>9%</td>
<td>-.050</td>
</tr>
<tr>
<td>The interruptions by the interpreter made it:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Easier for me to remember what happened in the meeting (1 [no] – 7 [yes])</td>
<td>3.57</td>
<td>1.74</td>
<td>45%</td>
<td>25%</td>
<td>.060</td>
</tr>
<tr>
<td>More difficult for me to remember what happened in the meeting (1 [no] – 7 [yes])</td>
<td>2.39</td>
<td>1.40</td>
<td>75%</td>
<td>6%</td>
<td>-.140</td>
</tr>
<tr>
<td>Whilst the interpreter spoke I was:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thinking about what to say next (1 [no] – 7 [yes])</td>
<td>3.54</td>
<td>2.08</td>
<td>50%</td>
<td>29%</td>
<td>-.271*</td>
</tr>
<tr>
<td>Thinking about what happened in the meeting (1 [no] – 7 [yes])</td>
<td>4.63</td>
<td>1.79</td>
<td>21%</td>
<td>51%</td>
<td>-.056</td>
</tr>
<tr>
<td>Answering the questions in your own language without an interpreter, would affect what you say by saying?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(1 [less] – 7 [more])</td>
<td>4.40</td>
<td>1.52</td>
<td>13%</td>
<td>32%</td>
<td>.016</td>
</tr>
</tbody>
</table>

Note * p = .001
Table 3.5 shows that the vast majority of participants did not agree with the negative statements about the use of interpreters. Thus, they did not find the interpreter annoying, distracting or disturbing, neither did they think that the interpreter’s interruption made (i) the interview more difficult or (ii) it difficult to remember what happened in the meeting, rejecting Hypothesis 2. The participants were divided about the positive effects of having an interpreter, some saw positive effects and others did not, with many participants being undecided about the positive aspects (score of 4 on 7 point scales). However, overall more participants were positive rather than negative about the use of an interpreter.

While the interpreter spoke, more participants were thinking about what happened in the meeting (51%) than about what to say next (29%). Finally, in answer to the question about how they would have got on without an interpreter, 13% said that they would have said less, whereas 32% said that they would have said more. We also correlated the participants’ experiences of their interpreter with the amount of detail they provided in their interviews (see Table 3.5). Only one out of the 12 correlations reported in Table 3.5 was significant. This is almost what could be expected by chance which means that the participants’ experiences of their interpreters, as reported in post-interview questionnaires, were unrelated to the amount of detail they gave during their interviews.

**Rapport with interviewer (Hypothesis 8)**

A 2 (Veracity) X 5 (Interpreter Condition) ANOVA, with reports of rapport with the interviewer (measured on a 7 point scale from 1 to 7) as the dependent variable, revealed significant main effects for Veracity, $F(1, 250) = 9.58, p = .002, d = 0.37$, and Interpreter Condition, $F(4, 250) = 2.61, p = .036, \eta^2 = .04$. Truth tellers reported significantly higher levels of rapport with the interviewer ($M = 5.27, SD = \ldots$
.89, 95% CI [5.13, 5.41]) than liars (M = 4.97, SD = .75, 95% CI [4.82, 5.11]), rejecting Hypothesis 8. That is, that liars and truth tellers would experience the same level of rapport with the interviewer. Regarding the Interpreter Condition main effect, participants in the Interpreter next to the interviewer condition experienced significantly higher levels of rapport, (M = 5.35, SD = .82, 95% CI [5.13, 5.58]), than participants in the non-native English without an interpreter condition (M = 4.88, SD = .87, 95% CI [4.64, 5.10]). These two conditions did not differ from the native-English condition (M = 5.05, SD = .85, 95% CI [4.84, 5.26]), the Interpreter behind the interviewee condition (M = 5.07, SD = .80, 95% CI [4.84, 5.30]) and the telephone interpreter condition (M = 5.25, SD = .78, 95% CI [5.00, 5.47]). Neither did the latter three groups differ from each other. The Veracity X Interpreter Condition interaction effect, F(4, 250) = .32, p = .862, ns, $\eta^2 = .01$, was not significant.

Discussion

Information-Gathering

In alignment with Hypothesis 1 and previous research (Ewens et al., 2014) native-English participants, interviewed in English, provided more detail than non-native participants who were either interviewed in English (for them a non-native language) or in their native language through an interpreter. This pattern of results was found regardless of whether the interpreter or interviewee’s responses were analysed. It is likely that the participants who were interviewed in a non-native language without an interpreter lacked the vocabulary to provide as much detail as the native-English participants or experienced too much cognitive load during their interviews. Lack of vocabulary became evident regardless of the length of the interviews. Even though participants who spoke in a non-native language provided less detail than their
English counterparts, their interviews were longer ($M = 12$ minutes and 40.56 seconds versus $M = 9$ minutes and 2.60 seconds).

Those who spoke in their native language through an interpreter did not have problems with vocabulary and for them providing information should not have been too cognitively demanding. Yet, these participants gave significantly less detail than the native-English speakers and an equal amount of detail as the participants speaking in a non-native language without an interpreter. These findings replicate those obtained by Ewens et al. (2014). However, Ewens et al. (2014) could only speculate why interviewees interviewed in their native language said less with an interpreter present than with an interpreter absent and suggested that (i) interviewees could find the interruptions of the interpreter annoying and therefore said less, (ii) the interpreters’ interruptions could hamper their memory retrieval, or (iii) the presence of an interpreter made the interviewee decide to be concise. One aim of the present experiment was to test these suggestions and we found most support for the third suggestion.

In the present study, very few participants found the interpreter annoying, distracting or disturbing. Neither did they think that the interpreter made it more difficult for them to remember what had happened in the meeting. In fact, participants typically found the interpreter pleasant and relaxing and that the interpreter made it easier for them to remember what had happened in the meeting. However, almost a third of the interviewees indicated that they would have said more had they been given the opportunity to be interviewed in their own language without an interpreter. A possible explanation as to why interviewees are reluctant to say much through an interpreter is the additional time required to communicate through an interpreter. The mean length of the three interpreter condition interviews was 16 minutes and 25.29
seconds, longer than the length of the native English interviews (9 minutes and 2.56 seconds). Future research should investigate whether the time factor does indeed contribute to the limited amount of detail supplied.

The interviewees’ views on the presence of an interpreter were measured via self-reports, which has disadvantages and advantages. The disadvantage is that findings of self-reports are not as conclusive as experimental findings. However, self-reports have many advantages. First, the three explanations as to why interviewees said less with an interpreter than when they spoke in their native language could be examined in one single study, which would be considerably more difficult when introducing these factors in an experimental design.

Second, self-reports can reveal clear trends in interviewees’ thinking. The results showed that interviewees did not demonstrate a negative attitude towards their interpreters. Research has shown that interviewers can have differing views on the use of interpreters. Some interviewers suggest interpreters have a negative effect on rapport and, subsequently, the elicitation of information (Soufan, 2011, Russano, Narchet, Kleinman & Meissner, 2014), a view echoed in the US Department of Defence field manual on intelligence collection (Driskell, Blickensderfer, and Salas et al., 2013). Other interviewers believe that understanding the language, which is only possible through an interpreter, can have a positive effect (Russano, Narchet, Kleinman & Meissner, 2014). This view is shared by interpreters themselves who also believe that they can give insight into the culture of the interviewee (Russano, Narchet & Kleinman, 2014). From an interviewee’s perspective, to have someone in the room who speaks their language may feel like an ally to them or be of some reassurance. In other words, the view that an interpreter in the room has a negative effect is not shared
by all interviewers, and may not be shared by interpreters and interviewees. Future research could further examine this important issue.

Third, self-reports can give valuable ideas for future research. The finding that interviewees showed reluctance to provide information in the presence of an interpreter makes it relevant to examine what would happen if their expectations were raised about the amount of detail they are supposed to provide. This can be achieved by providing examinees with a model statement (a very detailed statement about an unrelated topic) prior to the interview. Research has shown that interviewees who were interviewed after listening to a model statement said twice as much as those who were interviewed without listening to a model statement (Leal, Vrij, Vernham, Warmelink, & Fisher, 2015). It is worth exploring whether a similar effect can be achieved in interpreter interviews.

In the present experiment, no difference was found in the amount of detail provided between the three interpreter conditions, therefore rejecting Hypothesis 3. Since visual contact increases interaction rates between people (Hearn, 1957), we predicted that interviewees would provide less detail if they could not see the interpreter (in the ‘Interpreter behind the interviewee’ and telephone interpreter conditions). However, the interviewees could still see the interviewer in all three interpreter conditions, which could explain why the lack of visual contact with the interpreter did not affect the amount of detail they provided.

In the interpreter conditions, more details emerged when we analysed the interviewees’ own responses than when we analysed the interpreters’ translations of their responses. In other words, information got lost through translation. This finding is not surprising but should be taken into account when using interpreters. Perhaps different ways of translation may yield different findings. In this experiment we used a
long consecutive translation method in which the interpreter summarised the details provided by the interviewees. An alternative is short consecutive translation whereby an interpreter interprets the interviewee’s spoken words sentence by sentence. Perhaps a short consecutive translation would lead to less loss of information than a long consecutive translation. This could be tested in future research. The disadvantage of short consecutive translations is that the interpreter interrupts the interviewee frequently and this may disrupt the flow of the interview.

**Verbal Cue to Deceit: Quantity of Detail**

When analysing the interpreter’s responses, truth tellers were more detailed than liars and the difference in detail was substantial (Cohen’s $d = 0.95$). When we examined differences between truth tellers and liars in each of the five interview conditions we found significant differences in all five conditions and d-scores ranged from, $d = .68$ (telephone interpreter condition) to $d = 1.60$ (Interpreter next to the interviewer condition). Effect sizes of $d > .80$ are considered large (Cohen, 1992). When analysing the interviewees’ responses, truth tellers were still more detailed than liars and the difference in detail was again substantial (Cohen’s $d = 1.06$). When we examined differences between truth tellers and liars in each of the five interview conditions we found significant differences in all five conditions and d-scores ranged from, $d = 0.77$ (non-native English without an interpreter condition) to $d = 1.72$ (Interpreter next to the interviewer condition).

These findings do not support Hypothesis 4 where it was predicted that cues to deceit were more likely to occur in interviews without an interpreter than in interviews with an interpreter. In theory, a strong veracity effect may have masked more subtle differences in the elicitation of cues to deceit. That is, if differences in detail are substantial between truth tellers and liars, significant differences are likely to occur in
all interview conditions. However, differences could still have emerged between the interview conditions in the extent to which truth tellers and liars differed from each other in each interview condition, which was not the case given the non-significant Veracity X Interview Condition interaction-effect. In addition, Ewens et al. (2014) also obtained a strong Veracity effect (Cohen’s $d = 0.75$), and found that only interviews without an interpreter revealed cues to deceit. The fact that interviews with interpreters revealed cues to deceit is good news for interviewers who use interpreters.

**Correct and Incorrect Information**

The aim of investigative interviews is not just to elicit a lot of information (which is measured via the variable ‘detail’ in the current study) but to also elicit accurate information. We therefore explored the amount of correct and incorrect information given in the interview. For truth tellers, a difference emerged in the proportion of correct detail provided when the interpreters’ responses were used with native-English participants providing a higher proportion of correct detail than the non-native participants who were interviewed in English or through an interpreter (with the telephone condition as an exception). Perhaps non-native English speakers interviewed in English provided a higher proportion of incorrect detail than native English participants because people who do not speak a language well do make mistakes. The participants in the ‘Interpreter next to the interviewer’ and ‘behind the interviewee’ conditions provided a higher proportion of incorrect information than the native English participants which suggests that the interpreters also made mistakes when translating the interviewees’ responses. This conclusion is supported by the finding that the difference between the ‘Interpreter next to the interviewer’ condition and the native English participants’ condition was no longer significant when the speech of the interviewee was used in the analyses. (Since the native English speakers
provided more detail than the participants in the interpreter groups, this still means that the native English participants gave more correct information than the participants in the interpreter groups.) We can only speculate regarding why the truth tellers in the Interpreter behind the interviewee condition made more mistakes (when we analysed their own responses) than their native speaking counterparts. It could be that the interpreter sitting behind them made them somewhat uncomfortable, resulting in them making mistakes. This speculation needs to be examined in future research.

Regarding the errors made by interpreters, someone could argue that different findings may have emerged if we had only recruited professional interpreters. However, the analyses in which we compared the interviewee’s own speech with the interpreter’s speech revealed that the interpreters did not make many mistakes (the proportions of correct information in own language and through an interpreter were 74% and 72% respectively). In addition, professional interpreters also make mistakes (Mulayim et al., 2014), even in high profile cases such as the court testimony with the witness Michelle Burger in the Oscar Pistorius trial (Ewens et al., 2014), see https://www.youtube.com/watch?v=CcASMGKhkAU

For liars, we reasoned that non-native interviewees who speak in English would stay closer to the truth due to the high demands imposed on them during their interviews, but Hypothesis 5 was not supported. Yet, we will not rule out that in other situations (for example when interviewees can speak their native language) imposing cognitive load will result in interviewees staying closer to the truth. This is an important question to examine because if investigators can design interview protocols that make liars less likely to provide deliberate inaccurate information, much would be gained. In alignment with the imposing cognitive load hypothesis van ‘t Veer, Stel and van Beest (2014) recently found that imposing cognitive load deters people from
lying. In their study participants rolled a die and reported the outcomes while under low or high cognitive load (memorizing a string of eight letters). The higher the score they reported, the more money they could earn. The rolling the die outcomes reported under low cognitive load were significantly higher than those under high cognitive load, suggesting that the participants under low cognitive load lied to get higher pay.

Of course, in van’t Veer et al. (2014) only brief answers were required, whereas extensive answers are expected in investigative interviews. Whether imposing cognitive load deters someone form lying in investigative interviews needs to be examined in future research.

**Seating Position Comparison**

One important aspect of the current experiment was to examine the effect of the interpreters’ seating position (next to the interviewer, behind the interviewee or outside the room using a telephone) on eliciting detail and cues to deceit. We found no meaningful differences between these three seating positions in the elicitation of information and cues to deceit and in interviewees’ self-reported experiences with the interpreter. Null-findings can be the result of lack of statistical power but we do not think that was the case in our experiment. The number of participants in each seating position cell was sufficient enough (varied between 49 and 52, truth tellers and liars combined) to detect small effect sizes at an alpha of .05. The effect of the interpreter’s seating position on the elicitation of information (and cues to deceit) is an important applied question to which practitioners and policy makers would like to know the answer. For them a null-finding can be informative, particularly if it is replicated in future research. Hopefully this PhD research will stimulate researchers to further explore the important issue of the impact of interpreter’s seating position on the elicitation of information and cues to deceit.
Interpreters can be used in different investigative interviewing contexts. For example, in (i) a cooperative witness interview, (ii) an information-gathering suspect interview (the setting used in this experiment), or (iii) an accusatory suspect interview. We believe that our findings can be generalised to the first two settings but not necessarily to the third setting, as the dynamics in accusatory interviews are fundamentally different from the ones examined here (Meissner & Kassin, 2004; Meissner, Redlich, Bhatt, & Brandon, 2012).

The US Army Field Manual (AFM) states that placing the interpreter behind the interviewee facilitates a dominant position for the interviewer, which suggests that the method is proposed for accusatory interviewing settings. Interviewers could place an interpreter behind an interviewee in settings other than an accusatory interview for a different reason: The interpreter being out of sight may facilitate direct face-to-face contact between the interviewer and interviewee. However, research has shown that interviewers prefer the ‘next to the interviewer’ seating position above the behind the interviewee seating position (Russano, Narchet, & Kleinman, 2014; Russano, Narchet, Kleinman, & Meissner, 2014). Telephone interviewing also facilitates direct face-to-face contact between the interviewee and interviewer and may be less awkward than having the interpreter sitting behind the interviewee. The finding that telephone interpreting worked equally well as the other seating positions is important, as telephone interpreting has substantial advantages. The interpreter does not have to be in the room or even in the country where the interview takes place. This facilitates the recruitment of top quality interpreters (it increases the pool of interpreters that can be recruited), reduces the costs (no travel costs are needed), and reduces waiting time for interpreters to arrive. Since the interpreter will not be able to see the interviewee, it also reduces discrimination by the interpreter towards the interviewee based on
physical characteristics. Intriguingly, as outlined in the Introduction of this chapter, although telephone interpreting is used in several countries, the US AFM 2-22.3 does not mention it (U.S. Department of the Army, 2006). If the results of this experiment could be replicated in future studies, those who are not using telephone interpreting may wish to consider introducing it.

**Rapport**

Interviewees in the ‘Interpreter next to the interviewer’ condition experienced significantly higher levels of rapport with the interviewer than participants in the non-native English condition with no interpreter, with no differences emerging between the three other conditions. This significant difference may be difficult to explain but goes against the finding that practitioners feel the presence of an interpreter damages rapport (Soufan, 2011; Russano, Narchet, Kleinman & Meissner, 2014), an assumption that has not been supported in the present experiment or in the other (limited) research in this area (Karliner et al., 2004; Ewens et al., 2014; Russano, Narchet & Kleinman, 2014; Russano, Narchet, Kleinman & Meissner, 2014).

There are some noticeable differences between real life criminal and intelligence interviews and our experiment which may explain the discrepancy between practitioners’ views and our findings regarding the effect of the presence of an interpreter on rapport. Firstly, real-life interviews are considerably longer. It may be that the interpreters’ interruptions to the flow of conversation will have a negative effect in the longer term, as tolerance of such interruptions may become less as time progresses. Secondly, the high levels of rapport experienced in this study could have been higher than those typically obtained in the field due to the context of the experiment and reduced stakes involved. In real-life interviews, suspects would be expected to feel more uncomfortable and potentially reluctant to talk and this may
have a negative effect on establishing rapport. Alternatively, it may be that the presence of interpreters has no negative effect on rapport. Our experiment showed that more participants found the interpreter pleasant and relaxing rather than annoying, disrupting or disturbing. In addition, more participants thought that the interpreters’ interruptions made the interview easier rather than more difficult. These findings present a positive picture for the presence of an interpreter. Finally, it could be that the presence of an interpreter has a different effect on interviewers’ and interviewees’ experiences of rapport. Interviewers could perceive the presence of interpreters negatively because their presence will slow down the pace of the interview and may affect the bond they wish to establish with the interviewee. The interviewees, on the other hand, may perceive it differently. They have an additional person in the interview who speaks their language, is a person that they may perceive as impartial and to whom they can relate to, and whose presence makes their interview cognitively easier.

**Methodological Considerations**

We decided upon using native English speakers, speaking in English as a control group. We did so because this is an interesting comparison from an applied perspective. English speaking interviewers are interested in how the responses delivered by non-native speakers, who either speak in English or in their native language through an English speaking interpreter, compare to the responses of native English speakers. Using English speakers as the control group meant that the allocation of participants to the experimental conditions was not random as native English speakers were not allocated to the interpreter conditions and vice versa. However, both the native and non-native English speakers were recruited from similar populations (university students and people working at the university) so we do think
that the native and non-native English speakers were comparable on characteristics other than having English as their first language.

We measured English proficiency with a scale from Embassy English. Of course, alternatives such as IELTS (International English Language Testing System) exist. We chose the Embassy English scale because it is easy to apply and resulted in high inter-rater agreement between the different coders.

Whilst having the interpreter in the room creates a confound, by increasing the number of non-interviewees in the room from zero to one, research has shown that a second interviewer in the room who displayed a neutral demeanour had no effect on eliciting information and cues to deceit (Mann et al., 2012). As the interpreters in the current study displayed a neutral demeanour, we have no reason to expect that the mere presence of the interpreter affected the findings. In addition, Driskell et al. (2013) examined how the introduction of a third party (a second interviewer) in a police interview setting affected rapport (it is thought that rapport influences the amount of elicited information). They found no difference in ratings of rapport when they compared interviews conducted by one or two interviewers. In all, there is no evidence to suggest that the mere presence of an interpreter has an effect on the amount of information elicited in interviews (or on the proportion of accurate information elicited in these interviews).

Research has shown that non-native speakers' level of proficiency has a significant impact on deception (DaSilva & Leach, 2013; Evans et al., 2013). It was not the aim of this chapter to test whether language proficiency has an effect on deception. Replicating this finding implies that we had to recruit many more participants than we did. We recruited non-native English participants with varying levels of English proficiency, as this reflects real life, and randomly distributed them
across all non-native English conditions. Thus, level of proficiency could not have affected the findings.

Although the coders initially were blind to the veracity condition of the participants while coding the amount of detail, someone could argue that they may have discerned after some time who were telling the truth and who were lying because key aspects of the story would remain more consistent amongst truth tellers’ stories than amongst liars’ stories. This argument applies more to deception research in which liars are instructed to fabricate entire stories than to our study where they were instructed to tell a mixture of truths and lies and in which deceptive stories showed some overlap with other deceptive stories and with truthful stories.

Finally, methodological reasons may be responsible for the null finding regarding the effect of an interpreter on rapport. A null finding could occur due to lack of sensitivity in the measurement of rapport. However, our measurement was not insensitive as it did reveal a difference in rapport between truth tellers and liars. If lying prevents rapport from being established in real-life interviews this could have a real effect on cooperation and information gain in terms of both suspect and witness interviews. Further studies are needed to investigate the impact of lying on rapport and furthermore which methods of building rapport work best with uncooperative interviewees.

**Conclusion**

Interviewees who spoke in their native language without an interpreter provided more detail than those who spoke in their native language with an interpreter. The latter group provided a similar amount of detail than those who were interviewed in a non-native language without an interpreter. Self-reported experiences suggest that interviewees’ tendency to say less in their native language when
interviewed through an interpreter compared to being interviewed without an interpreter was mostly the result of interviewees deciding to be concise when talking through an interpreter. The positioning of the interpreter had no effect on the total number of details reported or cues to deceit across all conditions which means that interpreting through the telephone could be considered if this null-finding can be replicated. Given the frequency with which interpreters are used, further research is needed to examine how to encourage interviewees to say more in the presence of an interpreter.
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Chapter 4: Experiment 3

Using the Model Statement to Elicit Information and Cues to Deceit from Native Speakers, Non-Native Speakers and those Talking Through an Interpreter

Foreword

The study outlined in this Chapter has been submitted to the Journal, *Legal and Criminological Psychology*. There is a difference between this Chapter and the submitted manuscript. This Chapter examines the effect an interpreter has on rapport however rapport was not included in the manuscript.

Abstract

The present experiment examined how the presence of an interpreter during investigative interviews affects eliciting information, cues to deceit and rapport, whilst using a model statement, a method that encourages interviewees to say more. A total of 60 native English speakers were interviewed in English and 186 non-native English speakers were interviewed in English (a non-native language) or through an interpreter. Interviewees either lied or told the truth about a mock security meeting they watched, and were asked to report this meeting twice: in an initial free recall and again after listening to the model statement. In the initial free recall, the native English speakers provided more detail than the non-native English speakers or those who were interviewed through an interpreter (the latter two groups did not differ in detail). The model statement resulted in the English speakers and those who were interviewed with an interpreter providing more commissions (additional detail) than the non-native English speakers (without an interpreter). As a result, after the model statement, the
native English speakers provided more detail than those who were interviewed through an interpreter who, in turn, provided more detail than the non-native English speakers. No difference was found in the amount of commissions provided by liars and truth tellers. Finally, rapport was not affected by the act of lying or by the presence of an interpreter.

**Introduction**

An increasingly globalised world has meant that investigators and interviewees are separated by a language barrier, more so now than at any time in history (Mulayim, Lai, & Norma, 2014). Not sharing the same native language may limit communication and poor communication can hinder the effectiveness of an investigative interview (Gibbons, 2001). In circumstances where interviewer and interviewee do not speak each other’s language, an interpreter could become a vital part of an investigation.

Chapters 2 and 3 of this thesis describe two experiments examining the effect of an interpreter on eliciting information and cues to deceit. The main finding obtained in both studies was that interviewees who spoke in their native language provided more information than interviewees who spoke in their native language through an interpreter. Furthermore, those who spoke through an interpreter gave the same amount of information as participants who were asked to speak in a non-native language.

Three possible explanations were given as to why those who spoke through an interpreter said less (Ewens et al., 2014). First, interpreters disrupt the flow of conversation. Disruptions during conversations lead to annoyance and anxiety (Bailey & Konstan, 2006), and interviewees who are annoyed may volunteer less information (Bull, 2010; Fisher, 2010). Second, disruptions may hamper memory retrieval, which
would result in less information being reported (Nelson & Goodmon, 2003). Third, an interviewee may be more concise given the extra time it takes to communicate through an interpreter. Chapter 3 described how, after being interviewed with an interpreter, participants were asked to report in a post-questionnaire to what extent these three explanations applied to them during the interviews. The participants did not find having an interpreter present annoying nor did they think that it had affected their memory retrieval. However, almost a third of interviewees indicated that they would have said more if they were given the opportunity to speak in their native language.

This finding makes it relevant to explore methods that explicitly encourage people who speak through an interpreter to say more. There are several methods that have been shown to encourage people to say more, including introducing a silent second interviewer who is supportive throughout (Mann et al., 2012), or deliberately mimicking the interviewee (Shaw et al., 2015). See Vrij (2014) and Vrij, Leal, Mann, Vernham, and Brankaert (2015) for reviews of such techniques. Another possible way to encourage participants to give more detail is to provide them with a detailed model statement (MS), e.g., an example of a detailed account/story unrelated to the topic of the interview. Without prompting, interviewees tend not to tell all they know, in part, because their belief about how much detail is expected from them is inadequate (Fisher, 2010; Vrij, Hope, & Fisher, 2014). A MS changes interviewees’ expectations and shows them that they are expected to be more detailed. As a result, interviewees provide more detail having heard a MS compared to having not heard one (Hirn, Fisher, & Carol, 2012; Leal, Vrij, Warmelink, Vernham, & Fisher, 2015).

It is suggested that, when native speakers hear a MS they will realise that the investigators expect them to say more and they should be able to expand on their
accounts. For those speaking through an interpreter language is not a barrier, so they also should be able to say more after they have heard a MS. For interviewees who are interviewed in a non-native language without an interpreter a problem may occur as they may not possess the vocabulary to give additional details.

In the present experiment three groups of participants took part. Interviewees who shared the same language as the interviewer (English) and were interviewed in that native language (native English condition); interviewees who did not share the same language as the interviewer and who spoke in their own language through an interpreter (interpreter condition); and interviewees who did not share the same language as the interviewer but who were interviewed in the language of the interviewer (English), for them a non-native language (non-native English condition). Interviewees initially provided a free recall. After this free recall they listened to a MS and were then asked to report their experience again.

The MS may have a different effect on the native English and interpreter participants compared to the non-native English participants. The participants in the native English and interpreter conditions may be more able to give additional detail (commissions) after listening to a MS than the non-native English participants who will lack the vocabulary to do so (Hypothesis 1).

In the initial free recall, before listening to the MS, we might expect a replication of the findings of Chapter 3 which would mean that native English participants are likely to give more detail compared to those who are speaking through an interpreter and those speaking in a non-native language, and the interpreter group and non-native English group may not differ in detail. Since the MS is expected to have a different effect on the native English and interpreter participants than on the non-native English participants (see Hypothesis 1), we formulated the following
Recall Attempt X Interview Condition interaction hypothesis: Before the MS (Recall Attempt 1) the native English participants will be more detailed than the non-native English participants and those interviewed through an interpreter with no difference in detail between the two latter groups; After the MS (Recall Attempt 2) the native English speakers will provide more details than those who are interviewed through an interpreter who, in turn, will provide more details than the non-native English speakers (Hypothesis 2).

**Cues to Deceit**

Deception research has shown that truth tellers typically provide more detail than liars (DePaulo et al., 2003; Masip, Sporer, Garrido, & Herrero, 2005; Vrij, 2008). This may be because liars lack the imagination and skills to convey the amount of detail that truth tellers convey (Vrij, 2008), or may be reluctant to provide detail through fear that such details may provide leads for investigators to check (Nahari, Vrij, & Fisher, 2014). Both truth tellers and liars will realise when listening to a MS that more detail is required but, due to the reasons given above, it is likely that truth tellers will give more additional detail than liars. We thus predict that a MS would lead to more additional detail (commissions) from truth tellers than from liars (Hypothesis 3).

In terms of numbers of detail provided, when interviewees say more (the result of the MS) the likelihood of cues to deceit occurring will increase, because words are the carriers of verbal cues to deceit (Vrij, Mann, Kristen, & Fisher, 2007). Thus the difference in detail between truth tellers and liars, which we expect to be present in Recall Attempt 1 before the MS, may become more pronounced after the MS in Recall Attempt 2 (Hypothesis 4).
The pattern described in Hypotheses 3 and 4 could be less pronounced in the non-native English condition than in the native English and interpreter conditions. The non-native truth tellers may have language problems in Recall Attempts 1 and 2 and, if they do so, may provide fewer details at Recall Attempt 1 and fewer commissions and details at Recall Attempt 2. As a result, they may sound like liars.

**Correct and Incorrect Information**

Deception research mainly focuses on ‘cues to deceit’ (Vrij, 2008; Vrij & Granhag, 2012). However, the aim of an investigative interview is to elicit accurate information (Bull, 2010; Fisher, 2010). Liars typically embed their lies in truthful stories (Leins, Fisher, & Ross, 2013; Vrij, 2008), and as a result also provide accurate information. Additionally, truth tellers also provide incorrect information (see chapter 3), which goes against the stereotypical view that truth tellers have good memories and only provide accurate information. Thus, it is important to examine the amount of correct and incorrect information that both liars and truth tellers provide. It is also important to investigate how correct and incorrect information may differ (i) when speaking in a native language, a non-native language or when speaking through an interpreter and (ii) how it is affected by the interview protocol that is used. For truth tellers, in the native condition the interviewee is the only source that can provide inaccurate information but in the interpreter condition two sources can provide incorrect information: the interviewee and the interpreter. Not only do interpreters edit the interviewee’s answers (Nakane, 2009), but issues have also been raised over the use of equivalent words which are incorrect and the omission of details (Mulayim et al., 2014). Interviewees in the non-native English condition have the opportunity to give incorrect information (albeit by mistake) as they are speaking in a second language and do not have the correct vocabulary. We thus hypothesised that for truth
tellers more incorrect information would occur in the non-native English and
interpreter conditions than in the native-English condition (Hypothesis 5).

Regarding interview protocols, it would be desirable if interview protocols
could be devised which deter liars from lying. In all likelihood liars expect the initial
free recall (Recall Attempt 1 of an interview) and thus have prepared what they want
to say (Hartwig, Granhag, & Strömwall, 2007). They may not expect the MS and the
subsequent recall (Recall Attempt 2 of the interview) and may not prepare what to say
in Recall Attempt 2 which means that they have to decide on the spot which detail and
additional detail to give after the MS. This may be cognitively difficult. Research has
shown that people are less likely to lie when experiencing high cognitive load because
they then lack the cognitive resources required to lie (van ‘t Veer, Stel, & van Beest,
2014). In the present experiment it was expected that liars’ commissions would be
largely truthful, which would mean that the proportion correct information given by
liars would be higher in Recall Attempt 2 than in Recall Attempt 1 (Hypothesis 6).

Participants’ Language Skills and the Use of an Interpreter

In the UK under the Police and Criminal Evidence (PACE) Act 1984 (PACE,
1984), and probably in many other countries, interviewees have the right to an
interpreter. For obvious reasons people who do not speak the interviewer’s language
at all or not very well will opt for an interpreter. Furthermore, it has been noted that
interviewees request interpreters even though they can speak the interviewer’s
language fluently (Vaughan, 2009). Whilst this is initially thought to be done to waste
time, it may also be done for strategic reasons. Having an interpreter present makes
the interview easier for interviewees as they can speak in their own native language
and will get additional time to think when the interpreter translates their answers. This
‘making the interview setting easy’ strategy could be employed by liars and it is
therefore important to explore how successful this is. We thus divided the interpreter
group into two groups: a ‘low’ skilled and a ‘high’ skilled group where ‘skill’ referred
to the participants’ grasp of the non-native language of the interviewer. It is hereby
relevant to examine whether the same differences between truth tellers and liars occur
in both interpreter groups.

Rapport

Rapport is a critical element in investigative interviewing (Fein, 2006;
Driskell, Blickensderfer, & Salas, 2013), and is defined as a harmonious, positive and
productive relationship between an interviewer and interviewee (Evans, Houston, &
Meissner, 2012; Walsh & Bull, 2012). Establishing rapport has been found to
facilitate talking and cooperation (Bull & Soukara, 2010; Drolet & Morris, 2000;
Macintosh, 2009), to facilitate providing more accurate recall (Collins, Lincoln, &
Frank, 2002; Vallano & Schreiber Compo, 2011), and to facilitate gaining trust which,
in turn, facilitates relationship building (Abbe and Brandon, 2012).

The research into rapport in investigative interviews has primarily focused on
dyadic rather than triadic interactions. However, these interactions are fundamentally
different in terms of intimacy with closeness between interaction partners higher in
dyadic interactions (Simmel, 1964). Research has shown that the presence of an
interpreter does not affect the rapport between interviewer and interviewee in
investigative laboratory studies (see Chapters 2 and 3 of this thesis) and medical
studies (Karliner, Perez-Stable, & Gildengorin, 2004). However, a review of nine
interpreter-mediated healthcare encounters revealed that interpreters could potentially
affect rapport by expressing an opinion in the accounts of both the patient and doctor,
which could in turn have a detrimental effect on rapport (Fernandez, 2010). The effect
of an interpreter on rapport thus appears not to be clear cut.
The opinion of interviewers about the effect of interpreters on rapport is also inconsistent. Some interviewers suggest that interpreters have a negative effect (Soufan, 2011, Russano, Narchet, Kleinman & Meissner, 2014), whilst others believe that understanding the language, only possible through an interpreter, is a key step in successful rapport building (Russano, Narchet, Kleinman & Meissner, 2014; also see Chapter 5 of this thesis). Additionally, interpreters themselves believe they can improve rapport because they can give insight into the culture of the interviewee (Russano, Narchet & Kleinman, 2014). We therefore made no prediction about the effect of having an interpreter present on rapport but explored it in the present experiment.

Liars can feel guilty about lying or can be afraid of having their lies exposed (Ekman, 1985), and subsequently can express more negative affect than truth tellers (DePaulo et al., 2003). Those who experience negative emotions or affect may perceive their environment which a more negative frame of mind (Jundi, Vrij, Hope, Mann, & Hillman, 2013; Mann et al., 2012). As a result of this negative state, interviewees may view the interview negatively and become uncooperative and unresponsive to rapport building attempts. This PhD programme of research has shown contradictory findings. One study showed that rapport was not influenced by the act of lying (see Chapter 2), whilst another reported that liars experienced lower levels of rapport with the interviewer than truth tellers (see Chapter 3). For the current experiment, it was predicted that liars would experience less rapport with the interviewer than truth tellers (Hypothesis 7).

It is unclear how rapport will be affected by the interviewees’ level of English (low vs. high) of those speaking through an interpreter. The medical research suggests that interpreters may express their own opinions when interpreting the responses given
by both the patient and the doctor, which in turn may affect rapport (Fernandez, 2010). Those with a high level of English may understand both the interviewer and interpreter better and as a result get annoyed if the interpretation is not done accurately. On the other hand, those in the low level of English group may not understand the spoken English and as a result will not notice any inaccurate translation and therefore will be less annoyed by the interpreter than those with a better grasp of English. This issue was explored in the current experiment.

**Method**

**Design**

This study used a mixed subjects design with Veracity (truth versus lie) and Interview Condition (Non-native low English with interpreter, Non-native high English with interpreter, Native-English, Non-native English without an interpreter) as the between-subjects factors, and Recall Attempt 1 and Recall Attempt 2 as the within-subjects factors. Recall Attempt 1 was the three questions asked in the initial recall. Recall Attempt 2 was the same three questions but they were asked after the MS was played. The dependent variables were total detail elicited from interviewee, proportion correct detail elicited, cues to deceit (commissions, and proportion correct commissions), and interviewee self-reported rapport. In Recall Attempt 1 the transcripts were coded for correct and incorrect information. Correct detail was accurately reported information that was contained in the video participants watched, whilst incorrect detail was any inaccurate information reported. The total number of correct and incorrect pieces of information resulted in the total detail score. Detail included all the perceptual details (information about what the examinee saw or heard); spatial details (information about locations or the spatial arrangement of people and/or objects); and temporal details (information about when the event
happened or an explicit description of a sequence of events). The proportion of correct
detail was the proportion of the total number of details recalled that was correct. In
Recall Attempt 2 transcripts were coded for correct and incorrect commissions
(additional detail added from Recall Attempt 1). The proportion of correct
commissions was the proportion of the total number of commissions recalled that was
correct. Cues to deceit were measured by the amount of commissions provided in
Recall Attempt 2 and comparing the differences in commissions between truth tellers
and liars. Rapport was measured via the nine items Interaction Questionnaire (Vallano
& Schreiber Compo, 2011). Participants rated the interviewer on 7-point scales
ranging from [1] not at all to [7] extremely on nine characteristics.

**Participants**

A total of 246 participants (90 males and 156 females) took part in the study.
Their age ranged from 17-41 years with an average age of $M = 21.50$ years ($SD = 2.96$
years). Participants took part in four different countries and were British ($n = 60$),
Russian ($n = 65$), Korean ($n = 80$) and Hispanic ($n = 41$).

Table 4.1 shows the age and gender distribution in each Interview Condition
(namely, Non-native low English with interpreter, Non-native high English with
interpreter, Native-English, Non-native English without an interpreter). Age differed
between conditions $F(3, 242) = 5.15, p = .002, \eta^2 = .06$, with the participants in the
native-English condition being somewhat younger than the participants in the non-
native English and non-native low English with interpreter conditions. No other
differences emerged in terms of age

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7 When Age was introduced as a covariate in the Total Detail and Commissions
analyses reported in the Results section it was found that Age did not have a
four conditions $X^2(3, 246) = 8.62, p = .035, phi = .19$, with relatively few males being allocated to the non-native English condition$^8$.

When Gender was introduced as a covariate in the Total Detail and Commissions analyses reported in the Results section it was found that Gender had a significant effect on Total Detail, $F(1, 237) = 5.22, p = .023, \text{eta}^2 = .02$, but not on Commissions, $F(1, 237) = 2.34, p = .127, \text{ns, eta}^2 = .01$, or Rapport, $F(1, 237) = .65, p = .422, \text{eta}^2 = .003$. However, the analysis of covariance did not change the findings reported in the Results section regarding Total Detail.
Table 4.1

*Age and Gender Distributions as a Function of Interview Condition*

<table>
<thead>
<tr>
<th>Interview Condition</th>
<th>Age M</th>
<th>Age SD</th>
<th>Age CI</th>
<th>Gender Male</th>
<th>Gender Female</th>
<th>Interview length M</th>
<th>Interview length SD</th>
<th>Interview length CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interpreter low</td>
<td>22.29b</td>
<td>2.58</td>
<td>21.54,23.04</td>
<td>48.3%</td>
<td>51.7%</td>
<td>1471.43bc</td>
<td>650.74</td>
<td>1353.08,1624.64</td>
</tr>
<tr>
<td>Interpreter high</td>
<td>21.37ab</td>
<td>3.71</td>
<td>20.68,22.07</td>
<td>35.8%</td>
<td>64.2%</td>
<td>1594.42c</td>
<td>703.15</td>
<td>1465.55,1717.64</td>
</tr>
<tr>
<td>English</td>
<td>20.37a</td>
<td>1.96</td>
<td>19.63,21.10</td>
<td>40%</td>
<td>60%</td>
<td>737.28a</td>
<td>212.81</td>
<td>604.10,870.47</td>
</tr>
<tr>
<td>Non-native English</td>
<td>21.98b</td>
<td>2.90</td>
<td>21.25,22.71</td>
<td>23%</td>
<td>77%</td>
<td>1230.61b</td>
<td>456.12</td>
<td>1097.60,1361.22</td>
</tr>
</tbody>
</table>

Note: Only means with a different superscript differ significantly from each other (p < .05).
Grasp of English

In the post-interview questionnaire non-native English participants were asked to rate their English proficiency using an English language training scheme scale from Embassy English. The scale consists of five categories: [1] Beginner (those who know a few English words i.e., hello, taxi, football), [2] Elementary (those who can communicate in a basic way/can make simple sentences, reply to questions on a range of personal and common subjects, talk about likes and dislikes, family and routines), [3] Pre-Intermediate (those with a good basic ability to communicate and understand many subjects and give opinions, grammar includes understanding of adjectives, adverbs, comparatives and basic prepositions), [4] Intermediate (those who have the grammar to talk about a wide number of subjects, have some understanding of tone and style, can confidently make sentences, question forms and clauses), and [5] Upper-Intermediate (those who can talk fluently and almost completely accurately).

For participants in the non-native English condition (who did not have an interpreter), 2% classified themselves as Beginner, 23% as Elementary, 44% as Pre-Intermediate, 23% as Intermediate and 8% as Upper-Intermediate. For those in the interpreter conditions, 10% classified themselves as Beginner, 36% as Elementary, 14% as Pre-Intermediate, 22% as Intermediate and 18% as Upper-Intermediate. These two distributions differ significantly from each other, \( X^2(4, 186) = 25.54, p = .001, \phi = .37 \), and show that the participants in the interpreter conditions rated themselves as somewhat less skilled in English than participants in the non-English condition who did not have an interpreter. This probably reflects real life with the least skilled interviewees opting most frequently for being interviewed through an interpreter.

Three coders rated English proficiency of the participants in the non-native English without an interpreter condition (non-natives speaking English with no
interpreter) by listening to the interviews and using an English language training scheme scale from Embassy English. A reliability analysis revealed that the agreement between coders was very good (Cronbach’s $\alpha = .86$). When there was a disagreement between the three coders, two coders gave the same ratings and the third coder was an outlier. In such situations, we used the classification made by the two coders who agreed. The interviewees were classified as Beginner (0%), Elementary (15%), Pre-Intermediate (49%), Intermediate (29%), and Upper-Intermediate (7%). We recruited participants with varying levels of English proficiency as this reflects real life.

Additionally, all non-native participants were asked to indicate, via a yes/no response, if they would request an interpreter in a police interview in an English-speaking country. In the non-native English condition (with no interpreter) 84% would have requested an interpreter, whereas in the interpreter conditions 78% would have requested an interpreter. Those findings did not differ between these groups, $X^2(1, 186) = .70$, $p = .40$, $phi = .06$.

**Procedure**

Participants were informed that they were going to play the role of a security officer and that they would be viewing video footage from an intelligence agency of a secret meeting. All participants completed a pre-interview questionnaire in which they were asked to what extent they were motivated to perform well in the interview on a 5 point Likert-scale (1 = not at all motivated to 5 = very motivated). The pre-questionnaire was translated and completed in the native language of the participant.

Participants then watched the secret meeting video. The purpose of the secret meeting was to vote on a suitable location to plant a spy device. All participants were told to watch the footage and that it was essential they remembered as much detail as they could. The videos were translated and presented to the participants in their native
language. The meeting comprised three members, one of whom did all the talking and lead the meeting. Firstly, he spoke about the spy device and its technical features. Then he discussed the possible locations for planting the device. These locations included the name of the building, where specifically the device would be planted and why it was a suitable location. Two locations were discussed in full but before the third location could be discussed the leading member had to leave the meeting. The only information given about the third location was the name of the building. This resulted in all members taking a vote on which of the two locations was best to hide the device. The first location was always chosen as the selected site. Two variations of the video were used for counterbalancing. This was achieved by switching the order in which the three possible locations were presented, meaning that the selected site changed. Additionally, the device, which was visible in the video, was physically different in the two videos. The technical features, however, stayed the same. The videos were derived from Shaw et al. (2015).

Once the video had finished the participants were allocated to the truth telling ($n = 122$) or lying ($n = 124$) condition and subsequently given instructions (derived from Shaw et al., 2015). Prior to being interviewed, truth tellers were informed that the footage they had just watched had disappeared and that the agency had launched an investigation. They were told that the agency believed they had a mole working for them and it was of the upmost importance that the investigators knew as much detail about the video as they could. Truth tellers were told to fully cooperate with the investigators, to be completely truthful and to answer the questions to the best of their knowledge.

Prior to being interviewed, liars were informed that the footage they had just viewed had disappeared and the agency had launched an investigation and needed to
know in as much detail as possible what happened in the video. Liars were told it was their responsibility to recall that information in an interview. Liars were told that the intelligence agency believed they had a mole working for them, which could be one of the interviewers the liars were going to talk to. This meant that liars could not disclose all the information truthfully to the interviewer. Liars were told that the interviewer knew the device was going to be placed somewhere, but that they did not know where. So, above all, liars were told they must not reveal the location that was selected to hide the spy device and their objective was to mislead the interviewer. Liars were instructed, when asked to describe the location that was selected, to provide some false, decoy information. They were told to use the third location as the location that was selected to plant the device (although this was not the case). The name of the building has been presented in the video. However, as no other information was provided in the meeting about this third location, liars needed to invent these details. In total, they needed to make up three bits of information. First, the location of the building where the device would be planted. Second, within that building, where specifically the device would be planted and third a reason why this location was suitable to plant a spy device. Liars were also told that they needed to mislead the interviewer about the device. They were told that the interviewer knew something about the device but they did not have all the details, and it was not clear what they knew. Because of this, liars needed to provide some truthful and some false information about the device, which would help them to appear cooperative without having to tell the interviewer everything. It was up to the participants to decide how much truthful and false information they would give.

All participants were told that they must convince the interviewer that they were telling them the truth, and if they did they would receive £7 (or an equivalent
amount in Russia, Korea and the US). They were further told that if they could not convince the interviewer, they would be asked to write a report about the meeting.

Interview. Participants were then brought to the interview room and introduced to the interviewer and, if present, the interpreter. Both interviewer and interpreter were blind to the veracity of the participants. However, the interviewer was not blind to the conditions of the experiment. That is, whether there was an interpreter present or not. Two British female interviewers were used for all interviews and spoke English during the interviews. The interviewers (and interpreters if present) were instructed to keep an open posture but to avoid displaying any expressiveness, as being supportive or sceptical can influence participant’s responses during an interview (Mann et al., 2012). Both interviewers had vast experience in interviewing native English and non-native English participants in research studies, and were also used as interviewers for the studies described in Ewens et al. (2014, under review) and Vrij, Granhag, Mann, & Leal (2011).

In total, six interpreters were used in the study: Russian \( (n = 2) \), Korean \( (n = 2) \) and Hispanic \( (n = 2) \). Interpreters were requested to speak in the first person and to give a complete account of each interviewee’s response [to the best of their ability] after the interviewee had finished answering each question. The Korean and Hispanic interpreters were professional interpreters, the Russian interpreters spoke fluent English and both had a Masters degree, which included English language. They were allowed and encouraged to take notes when the interviewees spoke.

Participants in the interpreter groups were split into two different conditions depending on their levels of English. Using the self-reported scale outlined above participants who rated themselves at the Beginner or Elementary levels were classified as ‘non-native with interpreter (low level English) \( (n = 58) \) and participants who rated
themselves as Pre-intermediate, Intermediate or Upper-intermediate were classified as ‘non-native with interpreter (high level English) \((n = 67)\). The cut was made in this way as it resulted in the most equal allocation possible \((46\%-54\%)\) to the two interpreter conditions.

Aside from the two interpreter conditions, the study included two further conditions that did not have an interpreter present. One condition (native English) consisted of native English speaking participants \((n = 60)\) who were interviewed in English. These participants were recruited via the university in the UK. The other condition (non-native English without an interpreter) consisted of Russian, Korean and Hispanic native speakers \((n = 61)\) who were interviewed in English (and answered in English). These participants were recruited at the Russian, Korean and US universities respectively. In the non-native English without an interpreter condition, all participants spoke English well enough to ensure they would be able to get by in the interview (see below). The non-native languages were equally distributed across the non-native English and interpreter conditions, ensuring that language did not affect the amount of detail given in the conditions containing non-native speakers.

To make the interviewee feel comfortable and to avoid floor effects in establishing rapport interviewees were offered a glass of water from the interviewer, as offering something helps rapport building (reciprocal principle, Cialdini, 2007). The interview contained three initial questions. Question 1: “I’d like to start with you recalling what happened during the meeting. That is, starting from the moment the video started; please describe to me what happened from that point onwards until the end of the meeting?”; Question 2 (which was about the selected site): “I would like you to describe what it looked like from the inside, including the exact location where the device would be planted?”; Question 3: “Moving on to the device, I would like
you to describe for me what the device looked like and all of its technical features?”

Following these questions, the participants were played an audio recording of a model statement (MS). The model statement was a 1 minutes 30 second recording which contained a detailed account of an event unrelated to the topic of the interview. After listening to the MS participants were asked the same three questions. The order in which the second and third questions were asked was counterbalanced. See Appendix 3 for the full interview schedule.

To rule out that unspecified idiosyncratic features in the MS would be responsible for the absence of presence of the predicted MS effect, we used two MS (both equal in length). Both were unrelated to the secret meeting videotape, as we wanted to give participants an idea about what a detailed account entails rather than to give them an idea about what they actually could say during the interview. In one recording (also used in Leal et al., 2015) a person gave a detailed account of attending a motor racing event. This was a spontaneous, unscripted, recall of an event, truly experienced by the person, and the only instruction he received was to be as detailed as possible. The person was aware that this recall would be used as an example for others. We did not give any guidance about what types of detail to include and about what to say. Below is the 125 word recall.

“So I was walking down the middle of the grid but I was advised to go to one side as the cars were coming in, so not to get run over! I remember looking at the grandstand on my right - there were a lot of people stood there watching the grid. I walked towards position 11, which is where Tom was located. I remember looking closely at some of the pit girls which you would as a man. At this point I got out my phone to do a bit of filming as it’s not every day that you get to be on the grid at a formula 2 race!”
In the second recording a person gave a detailed account of a day at the beach. This was again a spontaneous, unscripted, recall of an event, truly experienced by the person, and the only instruction she received was to be as detailed as possible. The person was aware that this recall would be used as an example for others. We did not give any guidance about what types of detail to include and about what to say. Below the second, 125 word recall.

“We, go on a beach holiday to the same place every year, that is myself and my grown-up children. Erm. It’s kind of a tradition and we always have to visit the Blue Pool, because it’s their favourite. It scares the living daylights out of me but they love it! The Blue Pool is like a giant rock pool that’s left when the tide goes out, so it’s circular in shape. And they can jump off of the rocks at varying heights into this, apparently bottomless, pool of freezing cold water. And they like that. On the edge of the beach there were a load of starfish where the sea had come in and the tide had started to go out and just deposited literally hundreds of these starfish, which is something I’ve never seen before”.

Transcripts of the two full MS accounts can be seen in Appendix 4.

The interviews were video and audio recorded and the English speech in the audiotapes were subsequently transcribed. In the interpreter conditions the speech from the interpreter (rather than the interviewee) was transcribed.

After the interview, participants completed a post-interview questionnaire, which was translated and completed in the native language of the participant. The questionnaire measured likelihood of receiving £7 (or the equivalent) and likelihood of writing a statement, both were measured on 7 Likert point scales (1 = not at all to 7 = totally). Rapport was measured via the nine items Interaction Questionnaire (Vallano & Schreiber Compo, 2011). Participants rated the interviewer on 7-point
scales ranging from [1] not at all to [7] extremely on nine characteristics such as

Participants were further asked two questions related to the MS: (i) The model
statement made me realise that my initial answers were not detailed enough and (ii)
The model statement made me realise that my initial answers were too detailed. Both
questions could be answered on Likert scales ranging from [1] not at all to [7] very
much so.

Participants in the interpreter conditions also were asked whether they could
understand (i) the interviewer and (ii) what the interpreter translated back into
English. Both questions could be answered on Likert scales ranging from [1] not at all
to [7] very much so.

Coding

**Total Detail and Commissions.** The transcripts were read and each of the first
three questions (Recall Attempt 1) was coded for number of detail. Detail included all
the perceptual details (information about what the examinee saw or heard); spatial
details (information about locations or the spatial arrangement of people and/or
objects); and temporal details (information about when the event happened or an
explicit description of a sequence of events). We did not split detail into these sub-
categories as no hypotheses were formulated about them. The three questions after the
MS was played (Recall Attempt 2) were coded for detail in the same way as in Recall
Attempt 1 but this time it was also coded whether new details emerged (commissions,
detail added from Recall Attempt 1). A second coder coded a random sample of 50
transcripts. Inter-rater reliability between the two coders was, total detail (ICC = .95)
and commissions (ICC = .92).
In the Results section, we also looked at ‘proportion correct detail’ and ‘proportion commissions’. To complete this piece of coding, the coder was made aware of the content of the two versions of the video. Correct detail was any accurately reported detail from the video, whilst incorrect detail was any inaccurate information reported. ‘Proportion correct detail in Recall Attempt 1’ was the number of correct details in Recall Attempt 1 divided by the total number of details in Recall Attempt 1, and the ‘Proportion correct detail in Recall Attempt 2’ was the number of correct detail in Recall Attempt 2 divided by the total number of detail in Recall Attempt 2. ‘Proportion correct commissions’ was the number of correct commissions in Recall Attempt 2 divided by the total number of commissions in Recall Attempt 2. Inter-rater reliability between the two coders was, total correct detail (ICC = .97) and total correct commissions (ICC = .94).

Results

Manipulation Checks

Motivation, likelihood of receiving an incentive and receiving a penalty.

Three 2 (Veracity: truth or lie) X 4 (Interview condition: Non-native low English with interpreter, Non-native high English with interpreter, Native-English, Non-native English without an interpreter) ANOVAs were conducted on the three manipulation checks. The mean score for self-reported motivation pre-interview (sum of the 9 motivation items) revealed that the participants were motivated to perform well ($M = 3.90$, $SD = .72$ on a 5-point scale), with truth tellers and liars being equally motivated, $F(1, 238) = 2.96, p = .087$, ns, $d = 0.22$. Differences emerged in motivation between Interview Conditions, $F(3, 238) = 5.60, p = .001$, $\eta^2 = .07$, but when motivation was included as a covariate it had no effect on the findings related to Total Detail and Commissions discussed below. Truth tellers ($M = 4.74$, $SD = 1.35$, 95% CI [4.52,
4.99]) were more convinced that they would receive the incentive of £7 (or equivalent) than liars ($M = 4.10, SD = 1.41, 95\% CI [3.85, 4.32]), $F(1, 238) = 15.65, p < .001, d = 0.46$, whereas liars thought the likelihood of writing a statement was significantly higher ($M = 3.96, SD = 1.28, 95\% CI [3.73, 4.20]) than truth tellers ($M = 3.48, SD = 1.40, 95\% CI [3.23, 3.71]), $F(1, 238) = 8.58, p = .004, d = 0.36$.

**Understanding the interviewer and interpreter.** In the analyses for being able to understand (i) the interviewer and (ii) what the interpreter translated back in English, only the interpreter groups were included. Regarding being able to understand the interviewer, a 2 (Veracity) X 2 (Interview Condition: Non-native low English with interpreter, Non-native high English with interpreter) ANOVA revealed a significant effect for Interview Condition, $F(1, 121) = 11.22, p < .001, d = .59$. Participants in the non-native high English with interpreter condition ($M = 5.34, SD = 1.71, 95\% CI [4.87, 5.79]) could understand the interviewer better than participants in the non-native low English with interpreter condition ($M =4.32, SD = 1.73, 95\% CI [3.87, 4.69]). The Veracity main effect $F(1, 121) = .43, p = .65, d = .10$ and the Veracity X Interview Condition interaction effect $F(1, 121) = 1.01, p = .367, \eta^2 = .017$ were not significant.

Regarding being able to understand what the interpreter translated back in English, a 2 (Veracity) X 2 (Interview Condition) ANOVA revealed a significant effect for Interview Condition, $F(1, 121) = 22.79, p < .001, d = .91$. Participants in the non-native high English with interpreter condition ($M = 6.18, SD = 1.13, 95\% CI [5.76, 6.55]) could understand the interpreter better than participants in the non-native low English with interpreter condition ($M = 4.90, SD = 1.68, 95\% CI [4.53, 5.24]). The Veracity main effect $F(1, 121) = .011, p = .918, d = .05$ and the Veracity X Interview Condition interaction effect $F(1, 121) = .93, p = .338, \eta^2 = .008$ were not
significant. These findings indicate that the distinction into low and high level of
English interpreter groups has been successful and that there was a relationship
between the participants’ self-reported grasp of English and their understanding of the
interviewer and interpreter.

Impressions about purpose of the MS. The majority of participants (58%) reported that the model statement made them realise that their initial statement was not detailed enough (a score of 5 or higher on the 7-point Likert scale). A 2 (Veracity) X 4 (Interview Condition) ANOVA with the responses to whether the MS made the participants realise that their initial answer was not detailed enough as dependent variable, revealed a significant Veracity effect, $F(1, 238) = 5.97, p = .015, d = 0.33$. Liars ($M = 4.43, SD = 1.94, 95\% \text{ CI [4.09, 4.75]}$) thought more than truth tellers ($M = 3.82, SD = 1.78, 95\% \text{ CI [3.51, 4.17]}$) that their initial answers were not detailed enough. The Interview Condition main effect, $F(3, 238) = .44, p = .727, ns, \eta^2 = .01$, and Veracity X Interview Condition interaction effect, $F(3, 238) = 1.30, p = .276, ns, \eta^2 = .02$, were not significant.

A total of 11% of the participants reported that the model statement made them realise that their initial statement was too detailed (a score of 5 or higher on the 7-point Likert scale). A 2 (Veracity) X 4 (Interview Condition) ANOVA with responses to whether the MS made the participants realise that their initial answer was too detailed as dependent variable, showed that the Veracity main effect, $F(1, 238) = 3.44, p = .065, ns, \eta^2 = .014$, the Interview Condition main effect, $F(3, 238) = 1.07, p = .360, ns, \eta^2 = .013$, and the Veracity X Interview Condition interaction effect, $F(3, 238) = 0.572, p = .634, ns, \eta^2 = .007$, were all not significant. Those findings indicate that most participants realised the purpose of a MS, which is to encourage interviewees to provide more detail.
No difference emerged between the two MS in the number of commissions they elicited, $F(1, 244) = 1.75, p = .187, d = .17$, and in the number of details provided at Recall Attempt 2, $F(1, 244) = .63, p = .43, d = .10$.

**Interview length.** A 2 (Veracity; truth vs. lie) X 4 (Interview Condition) analysis was carried out with interview length (measured in seconds) as dependent variable. Interview length revealed a significant Veracity effect, $F(1, 238) = 17.90, p < .001, d = 0.52$, and a significant Interview Condition main effect, $F(3, 238) = 32.60, p < .001, \eta^2 = .29$. The truthful interviews ($M = 1406.66$ seconds (23 minutes and 26 seconds), $SD = 704.96$ seconds, 95% CI [1309.57, 1497.01]) were significantly longer than the deceptive interviews ($M = 1127.90$ seconds (18 minutes and 47.90 seconds), $SD = 266.64$, 95% CI [1027.42, 1212.85]). The Ms, SDs and CIs for the Interview Condition effect are provided in Table 4.2. The native-English interviews were significantly shorter than the non-native low English with interpreter, non-native high English with interpreter, and the non-native English without an interpreter interviews. Furthermore, the non-native English interviews were significantly shorter than the non-native high English with interpreter interviews, but did not differ from the non-native low English with interpreter interviews. The two interpreter conditions did not differ in duration. There was no significant Veracity X Interview Condition effect, $F(3, 238) = 2.09, p = .102, ns, \eta^2 = .03$.

**Hypothesis Testing**

**Total detail (Hypotheses 2 and 4).** A mixed ANOVA was conducted with Recall Attempt (Recall Attempt 1, Before the MS vs. Recall Attempt 2 After the MS) as the Within-subjects factor and Veracity (Truth vs. Lie) and Interpreter Condition (native-English vs. non-native low English with interpreter vs. non-native high English with interpreter vs. non-native English) as the Between-subjects factors. The
dependent variable was Total Detail. There was a significant main effect for Recall Attempt, \( F(1, 238) = 163.07, p < .001, d = 0.56 \). Interviewees gave more detail in Recall Attempt 2 (\( M = 58.05, SD = 27.18, 95\% CI [55.26, 61.35] \)) than in Recall Attempt 1 (\( M = 43.86, SD = 23.10, 95\% CI [41.53, 46.61] \)). There was also a significant main effect for Veracity, \( F(1, 238) = 50.12, p < .001, d = 0.84 \), with truth tellers (\( M = 120.32, SD = 48.79, 95\% CI [113.57, 128.23] \)) providing more detail than liars (\( M = 83.80, SD = 37.75, 95\% CI [76.60, 91.10] \)). The Interpreter Condition main effect was also significant, \( F(3, 238) = 11.70, p < .001, \eta^2 = .06 \). Simple contrasts tests showed that participants in the native-English speaking condition gave more detail (\( M = 125.52, SD = 45.33, 95\% CI [115.10, 135.93] \)) than participants in the non-native low English with interpreter condition (\( M = 100.88, SD = 51.78, 95\% CI [92.05, 113.29] \)), the non-native high English with interpreter condition (\( M = 99.93, SD = 46.98, 95\% CI [89.84, 109.55] \)), and the non-native English condition (\( M = 81.85, SD = 33.49, 95\% CI [71.29, 91.95] \)). The latter three groups did not differ in detail.

The Recall Attempt X Interpreter interaction effect was significant, \( F(3, 238) = 4.60, p = .004, \eta^2 = .06 \). In Recall Attempt 1, the four Interpreter Conditions differed significantly from each other in terms of detail, \( F(3, 242) = 5.82, p = .001, \eta^2 = .07 \). Simple contrasts tests revealed that native-English participants (\( M = 53.75, SD = 22.76, 95\% CI [48.04, 59.46] \)) provided more detail than non-native low English with interpreter participants (\( M = 42.12, SD = 26.14, 95\% CI [36.31, 47.93] \)), non-native high English with interpreter participants (\( M = 42.48, SD = 24.44, 95\% CI [37.08, 47.88] \)), and non-native English participants (\( M = 37.30, SD = 14.72, 95\% CI [31.63, 42.96] \)). The latter three conditions did not differ. This supported Hypothesis 2 that the native English speakers will provide more details than those who are
interviewed through an interpreter who, in turn, will provide more details than the non-native English speakers. In Recall Attempt 2, the four Interpreter Conditions also differed significantly from each other in terms of detail $F(3, 242) = 11.42, p < .001$, $\eta^2 = .12$. Simple contrasts tests revealed that native English participants ($M = 71.77$, $SD = 26.19$, 95% CI [65.26, 78.28]) provided more detail than the other three conditions (non-native low English with interpreter, $M = 58.76$, $SD = 27.46$, 95% CI [52.14, 65.38] vs. non-native high English with interpreter, $M = 57.45$, $SD = 26.37$, 95% CI [51.29, 63.61], and non-native English participants, $M = 44.56$, $SD = 22.05$, 95% CI [38.10, 51.01]. Additionally, those in the non-native English condition gave less detail than participants in the non-native low English with interpreter and non-native high English with interpreter conditions. The latter two conditions did not differ in detail. This also supported Hypothesis 2.

The Recall Attempt X Veracity, $F(1, 238) = 1.30, p = .255$, ns, $\eta^2 = .01$, and Recall Attempt X Veracity X Interview Condition interaction effects, $F(3, 238) = 1.17, p = .321$, ns, $\eta^2 = .02$ were not significant. A more appropriate test of Hypothesis 4 is to compare groups’ effect sizes to understand the magnitude of differences in each of the truth-lie comparisons (see Fritz, Morris & Richler, 2012, for a review). This information is provided in Table 4.2.
Table 4.2

*Detail in each Recall Attempt as a Function of Veracity and Interview Condition*

<table>
<thead>
<tr>
<th></th>
<th>Truth</th>
<th>Lie</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( M )</td>
<td>( SD )</td>
</tr>
<tr>
<td><strong>Detail in Recall Attempt 1</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interpreter low</td>
<td>56.11</td>
<td>29.42</td>
</tr>
<tr>
<td>Interpreter high</td>
<td>52.44</td>
<td>26.73</td>
</tr>
<tr>
<td>English</td>
<td>63.20</td>
<td>21.37</td>
</tr>
<tr>
<td>Non-native English</td>
<td>44.13</td>
<td>13.06</td>
</tr>
<tr>
<td><strong>Detail in Recall Attempt 2</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interpreter low</td>
<td>72.52</td>
<td>30.87</td>
</tr>
<tr>
<td>Interpreter high</td>
<td>62.74</td>
<td>25.06</td>
</tr>
<tr>
<td>English</td>
<td>80.73</td>
<td>26.43</td>
</tr>
<tr>
<td>Non-native English</td>
<td>51.74</td>
<td>22.11</td>
</tr>
</tbody>
</table>
Table 4.2 reveals that in Recall Attempt 1 truth tellers gave significantly more detail than liars in all four interview conditions with the effect sizes being substantial ($d = .91$ to $d = 1.12$). In Recall Attempt 2 truth tellers were more detailed than liars in three of the four conditions, with the non-native high English with interpreter group being the only condition in which no difference emerged between truth tellers and liars ($p = .096$). The effect sizes in Recall Attempt 2 were less substantial ($d = .41$ to $d = 1.03$) than in Recall Attempt 1, which means that Hypothesis 4 was rejected. That is, it was not the case that the difference in detail between truth tellers and liars was more pronounced after the MS in Recall Attempt 2.

**Proportion correct detail (Hypothesis 5 and 6).** A mixed ANOVA was conducted with Recall Attempt (Recall Attempt 1, Before the MS vs. Recall Attempt 2 After the MS) as the Within-subjects factor and Veracity (Truth vs. Lie) and Interpreter Condition (native-English vs. non-native low English with interpreter vs. non-native high English with interpreter vs. non-native English) as the Between-subjects factors. The dependent variable was proportion correct detail. There was a significant main effect for Veracity, $F(1, 238) = 496.24, p < .001, d = 2.64$, with truth tellers ($M = .93, SD = .06, 95\% \text{ CI} [.90, .95]$) providing a higher proportion correct detail than liars ($M = .54, SD = .20, 95\% \text{ CI} [.51, .56]$). The main effects for Recall Attempt, $F(1, 238) = .14, p = .713, ns, d = 0.01$, and Interpreter Condition, $F(3, 238) = 1.15, p = .332, ns, \eta^2 = .01$, were not significant. Furthermore, the Recall Attempt X Veracity, $F(1, 238) = 2.54, p = .113, ns, \eta^2 = .01$, Recall Attempt X Interview Condition, $F(3, 238) = 2.12, p = .097, ns, \eta^2 = .03$, and Recall Attempt X Veracity X Interview Condition interaction effects, $F(3, 238) = .79, p = .504, ns, \eta^2 = .01$ were not significant either. In sum, the MS and the way in which the participants were interviewed had no effect on the proportion of correct information they provided.
Hypothesis 5 was related to truth tellers and it was hypothesised that more incorrect information would occur in the non-native English and interpreter conditions than in the native-English condition. Hypothesis 6 was related to liars and it was hypothesised that liars’ commissions would be largely truthful, which would mean that the proportion correct information given by liars would be higher in Recall Attempt 2 than in Recall Attempt 1.

These hypotheses have not been tested in the above full design. We therefore carried out two 2 (Recall Attempt) X 4 (Interview Condition) ANOVAs for truth tellers and liars separately. For truth tellers the ANOVA resulted in non-significant effects for Recall Attempt, $F(1, 119) = .95, p = .33, \eta^2 = .008$, Interview Condition, $F(1, 119) = .59, p = .56, \eta^2 = .01$ and Recall Attempt X Interview Condition, $F(1, 119) = 1.24, p = .29, \eta^2 = .02$. The non-significant Interview Condition main effect means that Hypothesis 5 was rejected.

For liars the ANOVA resulted in non-significant effects for Recall Attempt, $F(1, 121) = 2.27, p = .14, \eta^2 = .02$, Interview Condition, $F(1, 121) = 1.60, p = .21, \eta^2 = .03$ and Recall Attempt X Interview Condition, $F(1, 121) = 2.21, p = .12, \eta^2 = .04$. The non-significant Recall Attempt main effect means that Hypothesis 6 was rejected.

**Commissions (Hypotheses 1 and 3).** A 2 (Veracity) X 4 (Interview Condition) ANCOVA was conducted with Commission as dependent variable and detail at Recall Attempt 1 as a covariate. For the commissions and proportion correct commissions analyses we included the number of detail in Recall Attempt 1 as a covariate, as the number of commissions depends on the amount of detail provided in Recall Attempt 1. The more detail given in Recall Attempt 1, the less opportunity participants have to add new detail in Recall Attempt 2.
The Veracity main effect, $F(1, 237) = .40, p = .528, ns, d = .12$, and Veracity X Interview Condition interaction effect, $F(3, 237) = .65, p = .583, ns, \eta^2 = .01$, were not significant but there was a significant Interview Condition main effect, $F(3, 237) = 3.90, p = .010, \eta^2 = .05$. The non-native English participants gave fewer commissions ($M = 21.52, SD = 15.31, 95\% \text{ CI } [17.33, 25.65]$), than the native English participants ($M = 34.68, SD = 17.14, 95\% \text{ CI } [30.49, 38.88]$), and the non-native high English with interpreter participants ($M = 29.27, SD = 18.78, 95\% \text{ CI } [25.32, 33.26]$). The non-native English participants did not differ from the non-native low English with interpreter participants ($M = 28.57, SD = 13.75, 95\% \text{ CI } [24.42, 32.97]$). No other differences emerged. The Interview Condition main effect findings supported Hypothesis 1. Participants in the native English and interpreter conditions provided more additional detail (commissions) after listening to a MS than the non-native English participants.

However, the absence of a Veracity main effect meant that Hypothesis 3 was rejected. That is, it was not the case that the MS led to more additional detail (commissions) from truth tellers than from liars.

**Proportion correct commissions.** A 2 (Veracity) X 4 (Interview Condition) ANCOVA was conducted with proportion correct commissions as the dependent variable and detail at Recall Attempt 1 as a covariate. There was a significant Veracity main effect, $F(1, 237) = 174.18, p < .001, d = 1.78$, with truth tellers ($M = .88, SD = .14, 95\% \text{ CI } [.85, .93]$) providing a higher proportion correct commissions than liars ($M = .52, SD = .25, 95\% \text{ CI } [.47, .55]$). Table 4.3 shows that this effect was substantial in all four conditions.
Table 4.3

*Commissions in each Recall Attempt as a Function of Veracity and Interview Condition*

<table>
<thead>
<tr>
<th></th>
<th>Truth</th>
<th>Lie</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Commissions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interpreter low</td>
<td>.87</td>
<td>.14</td>
</tr>
<tr>
<td>Interpreter high</td>
<td>.89</td>
<td>.13</td>
</tr>
<tr>
<td>English</td>
<td>.90</td>
<td>.09</td>
</tr>
<tr>
<td>Non-native English</td>
<td>.87</td>
<td>.19</td>
</tr>
</tbody>
</table>
The hypothesis that liars’ commissions would be largely truthful (Hypothesis 6) was not supported. The Interview Condition main effect, $F(3, 237) = .69, p = .560$, $ns, \eta^2 = .01$, and Veracity X Interview Condition interaction effect, $F(3, 237) = .52, p = .670, ns, \eta^2 = .01$, were not significant.

**Rapport with interviewer (Hypothesis 7).** A 2 (Veracity) X 4 (Interview Condition) ANOVA, with rapport with the interviewer as the dependent variable, revealed the Veracity main effect, $F(1, 238) = 1.78, p = .184, \eta^2 = .016$, Interview Condition main effect, $F(3, 238) = 2.63, p = .051, \eta^2 = .03$, and Veracity X Interview Condition interaction effect, $F(3, 238) = .43, p = .735, \eta^2 = .01$, were not significant. Hypothesis 7 was therefore rejected. That is, it was not the case that liars experienced less rapport with the interviewer than truth tellers.

**Discussion**

The participants in the native English condition, interviewed in English, and participants who were interviewed with an interpreter provided more commissions after listening to the MS than the non-native English participants speaking in English, supporting Hypothesis 1. Introducing the MS set the expectations for the amount of detail that was required in response to the questions asked. It is likely that the non-native English speakers lacked the vocabulary to provide the additional information that the MS suggested they should provide. In contrast, participants in the native English condition and those who spoke through an interpreter did not have an issue with vocabulary and were therefore able to add additional detail after listening to the MS.

In line with Hypothesis 2 and previous research (see Chapter 3) the native English participants provided more detail before the MS (in Recall Attempt 1) than the non-native English speakers and participants interviewed through an interpreter.
Furthermore, no difference was found in detail between the non-native English speakers and the participants interviewed with an interpreter. After the MS (in Recall Attempt 2), however, the native English speakers provide more detail than those who were interviewed through an interpreter who, in turn, provided more detail than the non-native English speakers. Thus, non-native interviewees said more when interviewed through an interpreter than when interviewed in a non-native language, but only after being encouraged to say more via a MS.

In terms of Recall Attempt 1, it is likely that the non-native English speakers failed to match the amount of information given by the native English speakers due to a lack of vocabulary. However, those in the interpreter group did not lack the vocabulary, as they were speaking in their native language, yet in Recall Attempt 1 they gave less information than the native English participants and an equal amount of detail as the non-native English speakers. We therefore argued that differences between non-native speakers speaking without an interpreter and those interviewed through an interpreter may occur by encouraging interviewees to say more (which we did via the introduction of a MS). Interviewees who have the vocabulary to be able to say more (those interviewed in their native language or through an interpreter) should benefit from listening to the MS and providing more detail. This is exactly what the study found.

Although the MS raised the expectations of all participants we had no reason to believe that the interpreter group would give an equal amount of detail as the native English group. In fact, after the MS the interpreter group still gave less information than native English speakers. As language should not have been a barrier for the interpreter groups it is important to try to understand the reasons why they did not give as much information. Both motivational and cognitive reasons could be at work.
Perhaps interviewees believe that interviews with interpreters take too long and that they therefore lack the motivation to say much. This is in alignment with the findings of Chapter 3 that almost a third of interviewees indicated that if they were to speak in their own language they would have given more information. It may be worth setting expectations about how long the interview might take and making interviewees aware that interviews with an interpreter are likely to take longer and they should not be concerned by this. If interviewees are aware that they should take all the time they need and that they will be there longer, thus managing their expectations, they may be willing to say more. Future research could investigate this. Impaired memory could be another reason for obtaining less information in interviews with interpreters. Interpreters disrupt the flow of providing information and interruptions impair memory retrieval and, subsequently, recall (Vrij et al., 2014). This cognitive explanation suggests that obtaining less information is inherent to consecutive interpreting, and perhaps more information would be obtained in simultaneous interpreting. This is a question for future research.

In this experiment we used a MS to encourage interviewees to say more. We believed that this could be an effective method to achieve this aim and easy to implement because the only task for the interviewer is to switch on the MS audiotape. Other methods to encourage interviewees to talk may also work and future research should examine this. A MS works better than a request ‘to be as detailed as possible’ (Leal et al., 2015), probably because a MS gives interviewees an example of what to do, whereas a verbal request to be detailed is just an instruction. It may be easier to learn from examples than from verbal instructions.

In the present study no difference was found in the amount of commissions provided by truth tellers and liars, rejecting Hypothesis 3. Furthermore, the difference
in detail between liars and truth tellers was not more pronounced after the MS, rejecting Hypothesis 4. Our assumption was that after the MS truth tellers would provide a more detailed account than liars because liars would lack the imagination to add as many details to their original account as truth tellers. In this study liars were asked to lie about the site that was selected to plant a spy device and also to give a mixture of truth and lies about the device. Perhaps this task was too easy for liars. They watched a video filled with information and perhaps it was not difficult for them to come up with additional information, based on what they saw in the video. If participants were asked to lie or tell the truth about something more complex, differences may occur. Future research should investigate using a more complex task. If truth tellers do not add more details than liars, the information they add may sound more plausible, as Leal et al. (2015) found. It was impossible to measure plausibility in the present study as truth tellers did not generate their own stories but reported what they saw in the video. Future studies in which truth tellers (and liars) generate their own stories could examine whether liars’ additions sound less plausible than truth tellers’ additions.

The findings do not support Hypothesis 5 which predicted that truth tellers would provide more incorrect information in the non-native English and interpreter conditions than in the native-English condition. Due to lack of vocabulary it was thought that the non-native participants might, albeit by mistake, give incorrect information. Additionally, in the interpreter conditions there were two opportunities for mistakes to be made: interviewee and interpreter. However, we did not find this to be the case. As the non-native speakers gave less information, it could be that instead of making mistakes they decided to say only the things they knew how to say. The interpreters may have made mistakes in the present study but maybe not so many and
not enough to make a difference. Understanding what errors interpreters make is an important issue to look into, as even when they make few mistakes, vital information could be lost.

In the present experiment we did not find that liars’ commissions were largely truthful. Thus the proportion of correct information given by liars was not higher in Recall Attempt 2 than in Recall Attempt 1, rejecting Hypothesis 6. Research has started to look into the information management of innocent and guilty suspects, that is, the regulation and manipulation of speech content. It showed that innocent and guilty suspects differ in their information management and that guilty suspects are more likely to plan their verbal content (Hartwig, Granhag, Stromwall, & Doering, 2010). Understanding how liars manage their information is an important aspect to consider and research is needed to look into such strategies. We know that liars do not tell complete lies but embed their lies in an otherwise truthful story (Vrij, 2008). It is not clear how they do this. In Recall Attempt 1 of this study just over half of the total information (54%) liars gave was correct, whereas after the MS 52% of their information was correct. This means that liars kept the ratio of providing correct and incorrect information constant in the two Recall Attempts. We do not know whether this was a deliberate effort and future research could investigate this. Truth tellers provided 93% of correct information in Recall Attempt 1, however, after the MS (in Recall Attempt 2) the amount of correct information given by truth tellers dropped to 88%. Although the MS has led to an increase in the quantity of information (compared to liars), it has also lead to a decrease in the quality of information and memory accuracy of the truth tellers. It is unclear whether this reduction in memory accuracy was due to the MS, thus future research should further investigate the effect of the MS on memory accuracy.
We further investigated how the level of English might affect those being interviewed with an interpreter. We found no difference between the non-native low English with interpreter and non-native high English with interpreter participants in terms of providing detail and commissions. What we did find was that in Recall Attempt 2 the non-native low English with interpreter group revealed a difference in detail between truth tellers and liars, with truth tellers giving more detail than liars, whereas this difference was absent in the non-native high English with interpreter group (see Table 4.2). However, there is no evidence that this absence of a difference in detail in the non-native high English with interpreter group is due to liars’ efforts. A close look at the mean scores in Table 4.2 shows that detail was low for truth tellers in the interpreter high condition. We can only speculate why this happened. Perhaps the truth tellers realised that it would be quicker to conduct the interview in English and got frustrated by the time it took for the interpretation to take place. As a result, due to the lack of effort to report what they knew, truth tellers started to sound like liars.

**Rapport**

The presence of an interpreter had no effect on the interviewee’s judgement of rapport with the interviewer. This supports the limited research in the area (Ewens et al., 2014; Karliner et al., 2004; Russano, Narchet & Kleinman, 2014), but goes against the thoughts of practitioners, who feel that presence of an interpreter damages rapport (Russano, Narchet, Kleinman & Meissner, 2014; Soufan, 2011).

These discrepancies may be a result of the noticeable differences between our experiment and real-life intelligence interviews. Real-life interviews take considerably longer to conduct and the interruptions to the flow of conversation may have a negative effect in the longer term as the tolerance for interruptions may decrease over time. The levels of rapport experienced in this study could have been could have been
higher than typically achieved in real life due to the context of the experiment and its low stakes. Suspects, in real-life interviews, would be expected to feel more uncomfortable and possibly reluctant to talk, which in turn could have a negative effect on rapport. Furthermore, interpreters have been shown to express their opinion to the accounts of patients and doctors (Fernandez, 2010), and may hamper any attempts to build rapport in real-life interviews. Also, for interviewers the presence of an interpreter may have a different effect on rapport than for the interviewee. The interviewer may perceive the interpreter as a disturbance but this view is not necessarily shared by interviewee, as interviewees find the presence of an interpreter pleasant and relaxing rather than annoying (Chapter 3 of this thesis).

Rapport was not influenced by the act of lying, rejecting Hypothesis 7. This highlights an inconsistent picture in the research conducted so far. Whilst one study has shown that liars have lower levels of rapport than truth tellers (see Chapter 3 of this thesis), this was not replicated in another study where liars and truth tellers reported similar levels of rapport (Chapter 2 of this thesis).

We also explored how the level of English of those speaking through an interpreter would affect rapport between interviewer and interviewee and found that rapport was not influenced by the level of English. It was suggested that those in the high interpreter group would be annoyed by the interpreter editing their responses because they could understand the translations better than those in the low English group. Even though participants in the non-native high English with interpreter condition could understand the interpreter (and interviewer) better than participants in the Interpreter low English condition, we did not find that they reported lower rapport. It may be that the interpreters did not edit the responses enough to annoy participants
and subsequently affect rapport. Future research should examine aspects that may affect rapport in interpreter mediated interviews.

**Methodological Considerations**

Within this study we used a control group consisting of native English speakers, speaking in English. We used this comparison group because it is the most interesting from an applied perspective. Interviewers are interested in the amount of detail given in their own language by native speakers, non-native speakers or by non-native speakers through an interpreter. In the present study we compared these different groups. A consequence of using the control group we used is that the native English speakers were not allocated to the interpreter conditions and that the allocation of participants to conditions was not entirely random. Efforts were made to make the participants in different countries as comparable as possible and we did so by recruiting them from similar populations (university students). We believe that our conditions were comparable, aside from English as a first language.

Methodological reasons may be responsible for the null finding regarding the presence of an interpreter and rapport. A null finding could occur due to lack of sensitivity in the measurement of rapport. However, we do not think this is the case as this measurement has been used before in previous studies and was not insensitive (Ewens et al., 2014; also see Chapter 3 of this thesis).

**Conclusion**

Interviewees who are interviewed through an interpreter are inclined to hold back information and typically say less than interviewees who are interviewed in a non-native language. However, the situation changes when interviewees are encouraged to say more. Interviewees interviewed through an interpreter saying more than those who speak in their non-native language. Interviewers should be aware of
the reluctance of interviewees to ‘tell it all’ through an interpreter and we recommend that they actively encourage interviewees to say more in interpreter interviews. This experiment illustrated that a MS may be a good way to achieve this.
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Chapter 5: Survey Study

Police Investigators’ Procedures relating to, and Perceptions of, Interviews involving Interpreters

Foreword

The study outlined in this Chapter has been submitted to the Journal, *Psychology, Crime and Law*.

Abstract

Interpreters are being increasingly used to bridge the language barriers between police investigators and interviewees. However, there is limited research which examines the perceptions of police personnel regarding the use of interpreter services. By questionnaire, 54 UK police participants reported on the procedural aspects of interviews with interpreters, their own experiences of using interpreters, and their perceptions of the impact interpreters have on interviews. Overall, there was no consistency in procedures used in terms of modes of interpretation and positioning of the interpreter. Furthermore, participants had limited awareness of the impact that interpreters may have on interviews. Participants’ views regarding interpreters were generally positive, however, the time it took to obtain an interpreter, the use of delaying tactics, and the lack of interpreters for uncommon languages were raised as problematic issues.
Introduction

More so now than at any time in history, police interviewers and interviewees are finding themselves separated by a language barrier (Mulayim, Lai, & Norma, 2014). Communication may become limited in multilingual interviews and poor communication can hamper the effectiveness of an interview (Gibbons, 2001). As clear communication and subsequently obtaining accurate information is fundamental for investigative interviews (Memon, Wark, Bull & Koehnken, 1997), bridging the language barrier is a vital element of interviews. One solution to bridging the language barrier is to use an interpreter.

English and Welsh police forces are obliged to provide interpreting services under the Police and Criminal Evidence (PACE, 1984). In 2013/14, constabularies spent an estimated £20 million on interpreter/translation services and the London Metropolitan Police recorded the highest figure of £6,213,077.00 (Metropolitan Police, 2015). With such a vast amount of money being spent in this area it may be surprising that the procedures regarding interviewing with an interpreter vary considerably across the 43 constituent constabularies. Bedfordshire Police use standard guidelines in terms of obtaining and booking interpreters. Additionally, the guidelines state that (i) interpreters should be advised on what will be discussed beforehand; (ii) the role of the interpreter should be explained to the interviewee e.g., the interpreter is not an advisor; (iii) the interpreter will speak in the first person; (iv) the interpreter may ask the interviewee to stop speaking; (v) decisions should be made about whether the situation should be dealt with by face to face or telephone interpreting (Head of Criminal Justice Department, 2011). The guidelines published by other police forces contain practical details including how to obtain qualified interpreters, fees, terms and conditions, vetting and checking interpreters’ identities.
and ensuring interpreters’ safety (Cleveland Police, 2015). Wiltshire Police include information, in their guide to the use of interpreters, about the interpreter services available, considerations prior to the interview of a detainee or witness undertaking the interview including interviewer and interpreter responsibilities for the interview process, modes of interpretation, and post interview procedure. These examples illustrate the variations in emphasis placed on different sets of police guidelines, across the UK, for the use of interpreters in investigative interviews.

Having an interpreter present in an interview changes the dynamics (Braun & Taylor, 2012; Phelan & Parkman, 1995) and this could affect the quality of police interviews. However, research is limited in terms of looking at the effects of interpreters in investigative settings. Protocols appear to focus more on the process of obtaining an interpreter with little attention paid to what happens inside the interview room, e.g., the mode of interpretation and where the interpreter should sit. As a first step towards a clearer picture, police personnel from one constabulary in the UK were surveyed with regard to procedures relating to, and perceptions of, the use of interpreters in investigative interviews.

It has been argued that the most effective way to obtain accurate information is to use rapport-building techniques (Driskell, Blickensderfer, & Salas, 2013). Establishing rapport is important as it facilitates talking and cooperation (Bull & Soukara, 2010; Drolet & Morris, 2000; Macintosh, 2009) and helps investigators gain interviewees’ trust. Trust facilitates relationship building which results in a more productive interpersonal experience (Abbe & Brandon, 2012). Some intelligence officers suggest that interpreters have a negative effect on rapport (Soufan, 2011, Russano, Narchet, Kleinman & Meissner, 2014), whilst others believe that understanding an interviewee, which is sometimes only possible through an
interpreter, is a key step in successful rapport building (Russano, Narchet, Kleinman & Meissner, 2014). Additionally, interpreters themselves believe they can improve rapport because they can sometimes give insight into the culture of the interviewee (Russano, Narchet & Kleinman, 2014). Currently no systematic research has been conducted to examine the views of UK police investigators who are interviewing with interpreters. The current research sought to examine whether they believed that rapport building is hindered when an interpreter is present.

When an interpreter is present language is not a barrier for the interviewee, as the interpreter can communicate in both the interviewer’s and interviewee’s language. Despite this, the limited research in this area has shown that interviewees who speak through an interpreter say significantly less than those who speak in their native language (Ewens, et al., 2014; Ewens et al., under review). When an interpreter is present the information can be relayed back to the interviewer in two different modes; consecutive interpreting and simultaneous interpreting (Gile, 2009). A further distinction can be made between two types of consecutive interpreting. *Short consecutive* interpretation involves the interpreter translating all turns of talk sentence by sentence. *Long consecutive* interpretation involves the interpreter translating segments of talk which may vary considerably in length (Viezzi, 2012).

Simultaneous interpreting involves the interpreter talking at the same time as the interviewee/interviewer and is often used for sign language or conference interpreting (Mulayim, et al., 2014) but less so during police interviews. It is not clear why it is not used frequently in police interviews but it may be due to the complex nature of this mode of interpretation and the distraction of having two people speaking at once. To date little is known about which method is best for investigative interviews. UK interview guidelines (Head of Criminal Justice Department, 2011;
Cambridgeshire Police, 2015; Cleveland Police, 2015) differ in their instructions with regard to recommended modes of interpretation. Some forces indicate that consecutive or simultaneous interpretation can be used (Dorset Police, 2014), whilst other forces do not mention interpretation methods in their guidance (Head of Criminal Justice Department, 2011). The current research sought to investigate whether police investigators are aware that interviewees who speak through an interpreter potentially give less information and what methods of interpretation are used in UK investigative interviews.

As is the case with interpretation in general, there appears to be no consistent guidance across forces regarding the seating position of interpreters in police interviews (Vaughan, 2009). There is potential for the interpreter to sit in a number of positions, e.g., behind the interviewee or next to the interviewer (Department of the Army, 2006). In the US, sitting next to the interviewer is seen as a more relaxed position whereas sitting behind the interviewee is seen as an opportunity to increase or maintain anxiety levels (Department of the Army, 2006). In addition to these two seating positions there is the opportunity to interpret via the telephone. Telephone interpreting (TI) is used by Australian Immigration (Ozolins, 2011), and in Swedish police interviews (Wadensjö, 1999). However, UK procedure indicates TI should only be used for procedural matters, e.g., obtaining name and address details, fingerprints/photographs and stating the reason for arrest, but not for evidential procedures, e.g., suspect PACE interviews and taking statements (Cambridge Police, 2015). Whilst further research is needed to investigate the impact of interpreter’s seating position on the effectiveness of interviews, it is important to look at what seating positions are being used. Placing the interpreter behind the interviewee, when they are the person that the interviewee directly communicates with, may create an
awkward social dynamic in the interview (Cross Cultural, Rapport-Based Interrogation, Version 5, 2010).

UK procedures state that, in the first instance, official interpreters should be sought (Cambridgeshire Police, 2015; Head of Criminal Justice Department, 2011; Wiltshire Police, 2015). However, this may not always be possible, e.g., when witnesses are interviewed in their own home, for ease and efficiency, investigators may use family members or friends. Furthermore, bilingual police officers are also used as interpreters (Berk-Seligson, 2011). However, using unqualified interpreters may jeopardise the interviewees’ rights, as the interpreters may lack impartiality and competence resulting in false confessions (Berk-Seligson, 2011). Chan (1995) stated that qualified interpreters are unlikely to be used for minor offences and casual enquiries, where police tend to use friends or relatives. In line with this, Wakefield, Kebbell, Moston, & Westera, (2014) found that interpreters were used more for suspects than victims/witnesses. However, witnesses/victims can be critical to the outcome of investigations (Kebbell & Milne, 1998) and they can give key information that can make or break a case. The current study sought to ascertain the frequency of deployment of interpreters across suspect and victim/witness interviews as well as whether these interpreters are officially registered or simply friends/family of the interviewees.

Police perceptions about using interpreters in the UK have been found to be relatively positive in terms of facilitating investigative interviews (Vaughan, 2009) however this study was somewhat limited by its small sample size. Wakefield (2014) conducted a survey in Australia and again recorded positive attitudes of police officers with regard to the use of interpreters. Officers felt that interviews were no more difficult to conduct with an interpreter than without, and their perceptions did not
differ as a function of whether the interviews were with suspects or witnesses/victims. The situation in the UK may differ from the situation in Australia and thus this survey looked at UK police investigators’ perceptions regarding their opinions of working with interpreters. Furthermore, the current study differed from those of Vaughan (2009) and Wakefield (2014) as the participants were not only asked about the protocols they follow but also about their ‘feelings’ towards interviewing with interpreters.

Method

Participants

A total of 326 invitations to participate in an online survey were emailed to potential participants who had been identified by the research manager of one UK constabulary as having the potential to use interpreters in investigative interviews. These included all custody investigation team staff and district Criminal Investigation Department (CID) teams for those areas that had a joint Custody Interview Team/CID unit. This yielded a total of 54 responses. Participants consisted of 28 males and 26 females whose ages ranged from 23 years to 60 years (M = 39.36 years, SD = 9.62 years). The ethnicity of participants included White British (n = 48) and White other (n = 5). One participant did not state their ethnicity. The participants’ interviewing experience ranged from 1-40 years (M = 10.9 years, SD = 8.5 years) and included a sample of Police Constables (n = 24), Detective Constables (n = 12), and Civilian Police Staff Investigators (n = 18). The participants had a variety of interview training which included, Tier 1 (n = 19), Tier 2 (n = 25), Tier 3 (n = 1), SOIT (n = 1), PSI (n = 1) and Initial training (n = 7). In terms of prior training specific to interviewing with interpreters, 49 participants indicated that they had not had such training and only 5 indicated that they had been trained in working with interpreters.
The percentage of interviews conducted with an interpreter within the last year ranged between 0% and 59% ($M = 12.04\%, SD = 12.38\%$). Broken down as a function of when participants had last used an interpreter, 41% of the participants said ‘up to one month prior to completing the questionnaire’, whilst 35% stated ‘between 2-6 months prior to the survey’, 18% indicated ‘6-12 months prior to completing the survey’ and 4% last used an interpreter ‘over 12 months prior to filling out the questionnaire’. One participant did not report a response.

**Survey design**

The survey was created using **Qualtrics**, an online survey tool. Once the survey had been constructed the link was sent to the research manager of the participating constabulary who, in turn, distributed the survey to the appropriate personnel. The survey consisted of four parts. The first part asked for demographic information about the participants. Information that was gathered included: age, gender, ethnicity, rank, years of interviewing experience and details of interview training courses.

The second part of the survey asked participants about procedures surrounding using interpreters. Questions in this section were: ‘Whose decision it is to call the interpreter?’ and ‘What is the protocol for calling an interpreter?’ Participants were given space to give open responses to these questions (i.e. their responses were not restricted by responses options imposed by the research team). The participants were also asked to indicate with which type of interviewees they used interpreters and they were given three response options: ‘Suspects only’, ‘Witnesses only’ and ‘Both suspects and witnesses’.

For the final questions in this section of the survey, participants were asked how often they used official or unofficial interpreters and how often interpreters sat next to the interviewer, behind the interviewee or translated over the telephone. In
terms of the style of interpretation, participants were asked how often interpreters used short consecutive interpretation, long consecutive, a combination of the two consecutive methods or simultaneous interpretation. Responses for these questions were given on Likert scales ranging from 1 to 5 (1 = Never, 2 = On the rare occasion, 3 = Sometimes, 4 = Often, and 5 = Always).

The third part of the survey was focused on participants’ perceptions of the impact that using an interpreter has on an interview. Questions were: ‘How is the pace affected by having an interpreter in an interview?’ (response options were ‘speeds up’, ‘slows down’ and ‘no difference’), ‘Do interpreters affect rapport?’ (response options were ‘helps’, ‘hinders’ and ‘no difference’), ‘Does an interpreter affect the information gained?’ (response options were ‘more information given’, ‘less information given’ and ‘no difference’), and ‘Do interpreters affect ease of credibility judgements?’ (response options were ‘easier to judge’, ‘harder to judge’ and ‘no difference’).

Finally, participants were asked to respond on a 5 point scale (1 = Never to 5 = Always) to indicate to what extent they felt interpreters add information that has not actually been given by interviewees.

The fourth part of the survey asked participants to indicate how they feel when they interview with an interpreter. Participants were asked five questions and responded on 5 point Likert scales (1 = Never to 5 = Always) about whether calling an interpreter left them feeling; annoyed, reassured, suspicious, relieved and frustrated.

Finally participants were asked, via open ended questions, if they would like to make any further comments regarding their experiences of working with interpreters during investigative interviews. See Appendix 5 for the full version of the questionnaire.
Results

From the topic areas contained in the survey the results have been ordered into three related areas of research, namely procedural aspects of interviews with interpreters, impact of using interpreters in interviews and experience when using an interpreter. These are discussed in more detail below.

Procedural aspects of interviews with interpreters

For some of the open ended response questions participants included more than one response which is why sometimes the total number of data points exceeds the total number of participants. With regard to whose decision it is to call an interpreter, a number of responses were given including: Custody Sergeant \((n = 40)\), Interviewing Officer \((n = 35)\), Suspect/ Victim \((n = 11)\), Solicitor/Appropriate Adult, \((n = 6)\), and Arresting Officer \((n = 1)\). Additionally, there seemed to be differences with respect to the protocol for finding an interpreter. Responses included: Calling language line/agency/centre \((n = 48)\), Using the internal intranet \((n = 4)\), Following the code of practice \((n = 1)\) and using the national register of interpreters \((n = 1)\).

In terms of who the police use interpreters for, the majority of participants \((89\%)\) reported using interpreters with both suspects and witnesses, 11% said they used interpreters for suspects only and nobody said they only used them for witnesses.

Table 5.1 shows the range of responses to nine questions where response options ranged from 1 (Never) to 5 (Always).
Table 5.1

*Frequency of officers’ responses regarding procedural aspects of using interpreters*

<table>
<thead>
<tr>
<th></th>
<th>Never (1)%</th>
<th>On rare occasion (2)%</th>
<th>Sometimes (3)%</th>
<th>Often (4)%</th>
<th>Always (5)%</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use official interpreters</td>
<td>5 (9)</td>
<td>0 (-)</td>
<td>2 (4)</td>
<td>8 (15)</td>
<td>39 (72)</td>
<td>4.41</td>
<td>1.21</td>
</tr>
<tr>
<td>Use unofficial interpreters</td>
<td>35 (65)</td>
<td>14 (26)</td>
<td>5 (9)</td>
<td>0 (-)</td>
<td>0 (-)</td>
<td>1.44</td>
<td>.65</td>
</tr>
<tr>
<td>Sit next to interviewer</td>
<td>35 (65)</td>
<td>10 (18)</td>
<td>9 (17)</td>
<td>0 (-)</td>
<td>0 (-)</td>
<td>1.52</td>
<td>.77</td>
</tr>
<tr>
<td>Sit behind interviewee</td>
<td>36 (67)</td>
<td>8 (15)</td>
<td>4 (7)</td>
<td>5 (9)</td>
<td>1 (2)</td>
<td>1.65</td>
<td>1.08</td>
</tr>
<tr>
<td>Via telephone</td>
<td>16 (30)</td>
<td>12 (22)</td>
<td>21 (39)</td>
<td>5 (9)</td>
<td>0 (-)</td>
<td>2.28</td>
<td>1.00</td>
</tr>
<tr>
<td>Short consecutive</td>
<td>1 (2)</td>
<td>3 (6)</td>
<td>17 (31)</td>
<td>20 (37)</td>
<td>13 (24)</td>
<td>3.76</td>
<td>.95</td>
</tr>
<tr>
<td>Long consecutive</td>
<td>0 (-)</td>
<td>2 (4)</td>
<td>16 (30)</td>
<td>25 (46)</td>
<td>11 (20)</td>
<td>3.83</td>
<td>.80</td>
</tr>
<tr>
<td>Combination of short and long consecutive</td>
<td>2 (4)</td>
<td>4 (7)</td>
<td>23 (43)</td>
<td>18 (33)</td>
<td>7 (13)</td>
<td>3.44</td>
<td>.95</td>
</tr>
<tr>
<td>Simultaneous</td>
<td>13 (24)</td>
<td>24 (44)</td>
<td>13 (24)</td>
<td>4 (7)</td>
<td>0 (-)</td>
<td>2.15</td>
<td>.88</td>
</tr>
</tbody>
</table>
Looking at the Mean scores, Table 5.1 reveals that official interpreters are used more than unofficial interpreters. In terms of seating position, there was no consistency in protocol. It was reported that the interpreter occasionally sits next to the interviewer and occasionally behind the interviewee. It was further reported that interpreters occasionally undertake translation via the telephone. Regarding the methods of interpretation, it was reported that short consecutive, long consecutive and a combination of both are often used whilst simultaneous interpretation is used on rare occasions.

**Impact of using interpreters in interviews**

The vast majority of participants (96%) said that having an interpreter present slowed the interview down whilst the remaining 4% did not think having an interpreter affected the length of an interview in any way. No one thought that the interpreter sped up the interview. In terms of rapport building the results were relatively evenly split: 37% of participants thought that an interpreter helped rapport building, 30% thought they hindered it, and 33% reported that it had no effect.

When participants were asked how they thought having an interpreter present affected the amount of detail provided, more than half of them (57%) thought it made no difference, while 26% thought interviewees provided less information and 17% thought interviewees provided more detail.

When it comes to judging the credibility of interviewees, the majority of participants (57%) thought it made no difference if an interpreter was present. However, 44% thought it was more difficult and 6% thought it was easier to judge credibility with an interpreter present.

Interestingly, the majority of participants (59%) thought that interpreters never added information to interviewees’ accounts as they see fit, whilst 24% thought they...
did so on the rare occasion and 17% thought they sometimes added information that
the interviewee had not actually mentioned.

**Feelings about interviewing with an interpreter**

Participants were asked to indicate on 5 point Likert scales from 1 (Never) to
5 (Always) to what extent they feel reassured, relieved, annoyed, frustrated, and
suspicious when they are working with interpreters during investigative interviews.
Table 5.2 reveals that participants report that they feel neither overly positive nor
negative when they are interviewing with interpreters.
Table 5.2

*Frequency of officers’ responses regarding their feelings when interviewing with interpreters*

<table>
<thead>
<tr>
<th></th>
<th>Never (1) (%)</th>
<th>On rare occasion (2) (%)</th>
<th>Sometimes (3) (%)</th>
<th>Often (4) (%)</th>
<th>Always (5) (%)</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Positive</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reassured</td>
<td>19 (35)</td>
<td>8 (15)</td>
<td>13 (24)</td>
<td>12 (22)</td>
<td>2 (4)</td>
<td>2.44</td>
<td>1.28</td>
</tr>
<tr>
<td>Relieved</td>
<td>33 (61)</td>
<td>8 (15)</td>
<td>11 (20)</td>
<td>2 (4)</td>
<td>0 (-)</td>
<td>1.67</td>
<td>.93</td>
</tr>
<tr>
<td><strong>Negative</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annoyed</td>
<td>29 (54)</td>
<td>13 (24)</td>
<td>12 (22)</td>
<td>0 (-)</td>
<td>0 (-)</td>
<td>1.69</td>
<td>.82</td>
</tr>
<tr>
<td>Frustrated</td>
<td>24 (44)</td>
<td>10 (18)</td>
<td>17 (32)</td>
<td>2 (4)</td>
<td>1 (2)</td>
<td>2.00</td>
<td>1.05</td>
</tr>
<tr>
<td>Suspicious</td>
<td>37 (69)</td>
<td>6 (11)</td>
<td>11 (20)</td>
<td>0 (-)</td>
<td>0 (-)</td>
<td>1.52</td>
<td>.82</td>
</tr>
</tbody>
</table>
An ‘overall feeling’ score was calculated for each participant by taking an average score. This was done by adding up the five questions and dividing the number by five. The negative feelings (annoyance, frustration and suspicion) were reverse coded so that the higher the score for ‘overall feeling’, the more positive the participant felt about interviewing with interpreters. The overall scores could potentially range from 1 (very negative) to 5 (very positive). Participants had an overall positive feeling towards interpreters ($M = 3.38, SD = .59$).

Via optional open ended questions, participants were asked to comment on their experiences with working with interpreters. The answers were collated and coded for themes that appeared in the responses. The responses revealed both positive and negative themes. The positive comments about having an interpreter present included; no misunderstanding/our job can be done properly ($n = 15$), reassures the interviewee ($n = 2$), they are helpful/useful ($n = 5$), and time for preparation ($n = 2$). The negative comments regarding using interpreters included; time consuming ($n = 18$), delay tactics ($n = 14$), not doing their job properly ($n = 2$), and availability of interpreter specifically for certain languages ($n = 4$).

Many of the participants were extremely positive about using interpreters and interpreters in general. They understood that interpreters make possible their task of interviewing people with no or little English. They also indicated that using interpreters ensured that they, as interviewers, were confident that interviewees had fully understand the process and/or interview questions, in addition to fulfilling the code of practice for potential prosecution purposes. One participant stated that, ‘interpreters are always professional and a pleasure to work with, my job would not be possible without them’, whilst another reported that, ‘they are an asset’. Two
participants also thought the additional time that occurs when obtaining an interpreter was useful as they could use this time to prepare.

There were, however, three major concerns that participants had with regard to using an interpreter. They expressed concerns about the time taken to interview with an interpreter. This was mentioned in terms of time spent contacting interpreters and time ‘wasted’ while waiting for interpreters to arrive at police stations (as they often have to travel a long way). These delays very much eat into the ‘custody clock’, leaving little time for the interview itself. Following on from this it appears that participants have concerns that interpreters are called as a delaying tactic, with one participant reporting that, on occasion, ‘the suspect is known to have a good command of English yet in custody displays poor command, so necessitating an interpreter which delays matters’. A further concern that was raised by participants was the difficulty in finding interpreters for specific languages. One reported Nepalese as an example and stated that his region had the largest Nepalese community in the UK, however, there are only two registered Nepalese interpreters in the UK.

Discussion

This survey was designed to obtain the perspectives of UK police personnel about procedures surrounding the use of interpreters in investigative interviews as well as their perceptions regarding the impact that interpreters have on the interview process and their feelings about using interpreters. The overall findings suggest an inconsistency in current methods used and a lack of awareness regarding the possible effects of interviewing with an interpreter.

Procedural aspects of interviews with interpreters

A number of sources were quoted in relation to whose decision it is to call an interpreter. The officer in charge must obtain authorisation from an Inspector or rank
above, before an interpreter is called (Head of Criminal Justice Department, 2011), however, it is apparent that many others have the opportunity to request an interpreter. In accordance with PACE, interviewees have the right to an interpreter and therefore it is not surprising that 11 participants mentioned that the suspect/witness decides. One important point to note is that participants mentioned, in open ended responses, that they found it frustrating that some interviewees, who could clearly speak fluent English, suddenly claimed to be unable to speak English once in custody. Participants believed that this was used as a delaying tactic. Such police perceptions have been reported before (Vaughan, 2009). The prevalence of this perceived time-wasting tactic is unclear. Future research should investigate if such issues are a real problem and look at potential ways to resolve them. This might be best achieved by researchers visiting custody suites to observe and record the events that take place, and decisions that are made, by all parties between booking in and interviewing suspects.

UK police investigators are instructed, whenever possible, to use official interpreters. Those surveyed for the current research indicated that they used official interpreters more often than unofficial interpreters. However, unofficial interpreters are still used and it is unclear in what capacity they are used and what affect this might have on investigations. The vast majority of participants indicated that they used interpreters for both witnesses and suspects. Yet, a proportion of participants indicated they only used interpreters for suspects. Witnesses and victims are crucial to investigations and their statements can provide vital information. Not having an interpreter present for a witness who cannot speak English may prevent him/her from providing a full and accurate account. Investigators should be made aware of the potential problems that might occur if interpreters are not requested for witness interviews.
With regard to modes of interpretation, the current research shows that consecutive interpretation is sometimes used and that simultaneous interpretation is used less frequently. One explanation for both being used is that modes of interpretation are not usually outlined in guidance materials. As no definitive method is being used, it may be that investigators are not aware of the different methods of interpretation and this is something that is not considered before the interview takes place. Additionally, officers may not think that the mode of interpretation can affect the quality of an interview and perhaps neglect this aspect. Interestingly, in a comment to the first author one officer reported struggling with the questions relating to the modes of interpreting, questioning why they would know what mode of interpretation is used. Furthermore, another officer indicated that simultaneous interpretation was the best method to use. As far as we are aware simultaneous interpreting is a very uncommon method of interpretation in police interviews, due to a number of complexities for both the interpreter and the interviewer. It involves the interpreter listening to one language, interpreting into a second language and talking at the same time. This is a specialised task and it is unclear how such a method may affect the interview. In terms of the interviewer, although this method may result in a shorter interview, having to listen to an interpreter talk, whilst an interviewee is talking (regardless of it being in another language) may be very distracting. Future research should address how different methods of interpretation affect the detail obtained from interviewees and how the different methods impact on the performance of interviewers.

**Impact of using interpreters in interviews**

When participants were asked about how the interpreter affected the pace of the interview the majority acknowledged that interviews involving an interpreter take
longer to conduct. Two participants did not think the interview was affected in terms of time, which comes as a surprise because everything has to be spoken twice in an interview with an interpreter. It might be the case that investigators change their interview strategy when dealing with interpreters to make the interview ‘easier’, e.g., shortening the questions. However, caution should be taken if such strategies are used so that the optimum amount of information is gained.

Rapport is seen as a critical step in building trust and relationships in professional interactions (Abbe & Brandon, 2012), however it is unclear whether interpreters affect rapport building. Those surveyed were relatively evenly split in their beliefs and so there was no clear response as to whether interpreters helped or hindered rapport-building. Since some participants did believe that interpreters hindered rapport building, it is important to look at ways of overcoming this problem. It may be beneficial to look at rapport from the interviewees’ perspective and whether they believe that rapport has been built. Investigators may feel that their attempts at rapport building are lost when they go through an interpreter. Thus, interviewers may think that interpreters hamper building rapport, but this view may not be shared by interviewees. Future research could explore the perspectives of the interviewer and interviewee on this issue.

The vast majority of participants believed that having an interpreter present does not affect the amount of information given in an interview, whilst some believed more information is given when an interpreter is present. These views are contrary to the (limited) research in this area which revealed that people who speak through an interpreter say less than people who speak in their native language without an interpreter (Ewens et al., 2014; Ewens et al., under review). Having the belief that information given in an interview is not affected by an interpreter may prevent
investigators obtaining vital information. It is therefore important for them to understand that interpreting is not a simple case of swapping one word for another and that it is possible that interpreters edit interviewees’ answers (Nakane, 2009).

**Feelings about interviewing with an interpreter**

The overall feeling towards using interpreters was positive. Participants believed that interpreters make their roles easier and are aware of the rights of the interviewee and their legal entitlement to an interpreter. They were also aware that cases could be compromised if these rights were not adhered to. In a time where using interpreters is at its highest it is important that interviews using interpreters are a positive experience. However, there is still much to do to facilitate such interviews.

The research highlighted three major problems with the use of interpreters: the time it takes to obtain an interpreter, the lack of interpreters for uncommon languages, and using interpreters as a delay tactic. It is important to uncover such issues and to advise that practical steps should be taken to overcome them. One possible avenue may be the use of telephone interpreting (TI). The advantages of TI include not having to wait as long for an interpreter to arrive, lower cost, and no stereotyping of interviewees, by interpreters, based on physical characteristics (Kelly, 2008). Whilst there are also disadvantages of TI including quality of sound (Kelly, 2008), and the interpreter being unable to capture the communicative cues that guide the interpretation (Wadensjö, 1999), little is known about the effectiveness of TI, and this area should be investigated further as a possible solution to the issue of time wasting. Alternatively, video-link interpreting is increasingly being considered as a means of overcoming shortages of interpreters, but its reliability in ensuring an adequate level of accurate and reliable information for evidential purposes has not yet been assessed (Cleveland Police, 2015).
Conclusion

Currently, within the UK, there is no guidance on how to effectively use interpreters within investigative interviews. This survey highlighted that there appears to be no consistency in methods used and police investigators have a limited understanding of the effects that interpreters may have on an interview. Whilst participants in the current study were generally positive about using interpreters the findings have revealed the need for future research into a number of different issues before firm and consistent guidelines can be published regarding the use of interpreters in police investigative interviews.
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Chapter 6: General Discussion

Overview of Main Findings and Theoretical Implications

The aim of this thesis was to examine the effect that interpreters have on eliciting information, cues to deceit, and rapport in investigative settings. In the three experimental studies (outlined in Chapters 2, 3, and 4), three groups of participants took part. English speaking participants were interviewed in their native language (the native English condition), participants speaking through an interpreter in their native language of Korean, Chinese, Hispanic, Arabic, Urdu, or Russian (interpreter condition) also took part as did participants who were from a Korean, Chinese, Hispanic, Arabic, or Russian background, but spoke in English, for them a non-native language (non-native English condition).

In the first experiment (Chapter 2) the mode of interpretation was manipulated, with the interpreters using either short consecutive interpretation, when the interpreter translates the interviewees’ speech sentence by sentence, or long consecutive interpretation, when the interpreter translates segments of speech which may vary considerably in length. In the second experiment (Chapter 3) seating position was manipulated with the interpreter positioned either behind the interviewee, next to the interviewer facing the interviewee, or outside the room using a telephone. The third experiment (Chapter 4) used a new technique to elicit information and cues to deceit: The model statement (MS) technique. A model statement is a detailed statement unrelated to the interview topic which indicates the level of detail that is expected from the interviewees in their responses. Chapter 4 also looked at whether the level of English ability (high or low) of those in the interpreter condition had an effect on eliciting information, cues to deceive, and rapport. Each experiment involved
participants lying or telling the truth about either their job or a mock secret meeting they watched. The final study (Chapter 5) was a questionnaire study which explored the perceptions of UK police investigators regarding the use of interpreters. The questionnaire focused on the procedural aspects of interviews with interpreters, investigators’ perceptions of the impact that interpreters have on the interview, and investigators’ feelings about using interpreters. The overall findings of all the studies and the theoretical implications will be discussed in terms of eliciting information, cues to deceit, and rapport.

**Eliciting Information.** The overriding finding from studies one and two was that those speaking in their native language gave significantly more detail than those who spoke in their native language through an interpreter and those who were speaking in a non-native language. Those speaking through an interpreter and those speaking in a non-native language did not differ in terms of the amount of detail they gave. As a result of these findings, the third experiment was designed to investigate whether using a Model Statement (MS) would elicit more information from the non-native speakers (both with and without an interpreter). The findings of study three replicated those of studies one and two in that the native speaking participants provided more detail than the non-native speakers. However, this time the participants in the interpreter conditions gave more detail than the non-native speaking participants speaking without an interpreter (this was the only time this happened in the entire project).

To explain the results of the model statement experiment, it is likely that the participants who spoke in a non-native language lacked the vocabulary to match the amount of detail given by their native speaking counterparts. This lack of vocabulary became more evident when the non-native participants listened to the MS and were
encouraged to replicate the high level of detail included in the MS. Before hearing the MS, the non-native speakers provided less detail than the native speakers and the same amount of detail as those who were speaking in a non-native language in the first two experimental studies. However, after the participants had listened to the MS a difference in the amount of information given emerged between the two non-native speaking groups. Those speaking through an interpreter gave more detail than those who did not speak through an interpreter. That said, whilst the MS encouraged those speaking through an interpreter to say more, they still did not match the level of detail given by the native speakers. This shows that there is a vast amount of information that could be missed when interviewing someone with an interpreter and future research should explore why this is the case.

Experiment 2 included asking participants about their experiences using an interpreter. It was found that participants did not find the interpreter annoying, distracting or disturbing. Neither did they think that the interpreter made it more difficult for them to remember what had happened in the meeting. In fact, participants reported that they typically found the interpreter pleasant and relaxing and that having the interpreter present made it easier for them to remember what had happened in the meeting. Almost a third of the interviewees indicated that they would have said more if they had been given the opportunity to be interviewed in their own language without an interpreter. These findings do not fully answer why less information is given when an interpreter is introduced. The reduced information as a result of the presence of an interpreter may be a consequence of the time it takes to conduct interviews with interpreters. Future research should investigate the aspect of time (this is discussed further in the future research section).
It is also important to examine how police investigators who use interpreters think that interpreters affect the amount of information given in an interview. When investigators were asked (in Chapter 5) how they thought the presence of an interpreter affected the amount of detail provided in an interview, the majority (57%) thought it made no difference, while 26% thought interviewees provided less information and 17% thought interviewees provided more detail. This goes against the results of all three studies in this thesis (Chapters 2-4) which found that those who speak through an interpreter report less detail. Of course the investigators’ responses to the survey in Chapter 5 depended on who they were using as a comparison group. If investigators were using English interviewees as a comparison, then their responses would go against the research (that is interviewees give less information when speaking through an interpreter compared to native speakers). However, if they were using non-native speakers without an interpreter as a comparison then their responses would support the research (that is there is no difference in the amount of detail given between interviewees speaking through an interpreter and interviewees speaking in a non-native language without an interpreter). The questionnaire did not suggest a comparison group and so this finding is difficult to interpret. Nevertheless, holding the belief that the information provided in an interview is not affected by an interpreter, may result in officers missing vital information. It is therefore important to make officers aware that when using interpreters, they may obtain less information and that they should plan their interviews accordingly.

Research has shown that interpreters edit interviewee’s answers (Nakane, 2009). The results of the studies reported in this thesis were driven by the interpreters’ translation of the interviewees’ responses. This was done because it is the interpreters’ speech that the interviewers in police interviews hear and understand. The study
described in Chapter 3 of this thesis compared interviewees’ own speech with the
translation provided by the interpreter. It was found that interviewees gave more detail
when their own responses were analysed compared to the interpreters’ translations.
This showed that information was lost in translation. This experiment used the long
consecutive interpretation method which required the interpreters to listen to full
answers before interpreting. It may be that information got lost during this method of
interpretation because the interpreter had too much to remember.

The findings that those who speak through an interpreter say less than those
speaking in their native language may to some extent be explained by the shift in
social dynamics that occurs when an interpreter is ‘added’ to an interview. One way
an interpreter can change that dynamics is through turn-taking (Russell, 2002). A
‘turn’ in a conversation between two or more people refers to the time when someone
is speaking. A turn can range from one sound or word, to a sentence, or paragraph. A
turn stops when someone else starts talking (Sacks, Schegloff, & Jefferson, 1974). A
dyadic police interview has a basic turn-taking system which consists of questions and
answers. The order and distribution of turns in a police setting are different form that
in a conversation (Coulthard & Johnson, 2007) due to the power asymmetry between a
police officer and interviewee. The police officer asks all the questions and the
interviewee is expected to answer them.

Any dyadic interaction is changed by the presence of an interpreter who will
control all of the speaking rights (Russell, 2002). The addition of an interpreter
transforms the dyadic environment into a triadic mixture of opposition, cooperation,
and shifting alignments (Russell, 2002). Taking turns to speak through an interpreter
requires a rigid discipline which may not always be enforceable. This can be
particularly so when an individual is from a culture where overlapping talk is
acceptable or even desirable (Tannen, 1984). However, an interpreter cannot interpret two speakers at the same time and therefore has to develop strategies to deal with this. The decision that the interpreter makes in terms of turn allocation can have an effect on both the processes and the outcomes of the investigative interview. If the interpreter believes that the interviewee has finished their turn the interpreter may start with his/her turn and translate what the interviewee has said. However, interrupting the interviewee may impair the interviewee’s performance and may result in forgetting vital information (Fisher, Geiselman, & Amador, 1989).

People have limited mental resources to process information (Kahneman, 1973). Performance therefore will suffer when several tasks are being performed at once. An interpreter has to carry out a number of different tasks including managing the turn taking between the interviewee and interviewer, remembering what the interviewee has said before converting the content into another language, and then interpreting the content into that language. The interpreter only has a limited capacity in his/her short-term memory. If this has been exceeded by what the interviewee says the interpreter has to decide whether to stop the interviewee whilst translating the turn so far, or allow the interviewee to continue to the end, potentially forgetting part of the information that has been given. Whatever decision the interpreter makes; the interview outcome may be influenced. If the interpreter stops the interviewee, s/he may prevent the interviewee from providing vital information. On the other hand, if the interpreter allows the interviewee to continue, the interpreter may forget vital information given by the interviewee.

The mode of interpretation (Short or long consecutive), the seating position (Interpreter next to the interviewer, interpreter behind the interviewee, or via the telephone), and the level of English (high or low) did not have an effect on the amount
of information that was given. It was argued that short consecutive interpretation would result in a more complete and accurate translation of the interviewee’s speech compared to long consecutive interpretation and therefore would produce more detail. However, no difference was found between the modes of interpretation (Chapter 2). It is possible that the increased disruptions in the short consecutive interpretation interviews impaired the interviewees’ performance and as a result the short consecutive interpretation did not amount to providing more information than the long consecutive interpretation.

In terms of seating position it was hypothesised that the interpreters sitting next to the interviewer would elicit more information from interviewees than those sitting behind the interviewee and those conducting telephone interpretations. Visual contact increases interaction rates (Hearn, 1957) which in turn should lead to more information. Those interviewees in the ‘next to the interviewer’ position had visual contact with the interpreter unlike the interviewees in the ‘behind the interviewee’ and telephone interpreting conditions. Furthermore, it was thought that the ‘behind the interviewee’ position would make interviewees say less because of the increased anxiety that is associated with this positioning. However, this did not occur and may be a consequence of the interviewee being able to see the interviewer. Although there was a lack of visual contact with the interpreter there was no lack of visual contact with the interviewer and it is the interviewer who the interviewee is trying to convince.

The null findings regarding the effect of interpretation modes and the interpreters’ seating position are important for practitioners and policy makers. If there is no difference in the amount of information obtained using the different modes of interpretation or the seating position of interpreters, then the most convenient or
comfortable method for interviewees could be used. However, the studies reported in
this thesis are the first to investigate the effect of the mode of interpretation and
seating position on eliciting information and future research should replicate the
findings before firm recommendations can be made.

**Correct and incorrect information.** This thesis further explored (in Chapters 3 and
4) the amount of correct and incorrect information provided. Chapter 3 revealed that
for truth tellers, a difference emerged in the proportion of correct detail provided when
the interpreters’ responses were analysed. Native-English participants provided a
higher proportion of correct detail than non-native participants who were interviewed
in English or through an interpreter (with the telephone condition as an exception).
Perhaps non-native English speakers interviewed in English provided a higher
proportion of incorrect detail than native English participants because people who do
not speak a language well do make vocabulary mistakes. The participants in the
‘Interpreter next to the interviewer’ and ‘Interpreter behind the interviewee’
conditions provided a higher proportion of incorrect information than the native
English participants which suggests that the interpreters also made mistakes when
translating the interviewees’ responses. This conclusion is supported by the finding
that the difference between the ‘Interpreter next to the interviewer’ condition and the
native English participants’ condition was no longer significant when the speech of
the interviewee was used in the analyses. It maybe that having the interpreter sitting
behind the interviewee made interviewees feel uncomfortable and as a result mistakes
were made.

The findings in Chapter 4 do not support those found in Chapter 3. Truth
tellers did not provide more incorrect information in the non-native English and
interpreter conditions than in the native-English condition. Therefore, non-native
speakers did not make mistakes due to their lack of vocabulary. However, the non-native speakers gave less information. It could be that they decided to say only the things they knew how to say.

What is clear from the two studies is that there is a complex picture surrounding how liars manage their information. An important first step is to focus on the strategies that liars use when dealing with correct and incorrect information. Liars embed their lies within a truthful story (Leins, Fisher, & Ross, 2013; Vrij, 2008) and as a result tend to provide a certain amount of correct information (Hartwig, Granhag, Stromwall, & Doering, 2010). Consequently, researchers should investigate how much correct and incorrect information liars give and what type of correct information they give.

Another important finding was that truth tellers also provided incorrect information. This goes against the stereotypical view that truth tellers have good memories and only provide accurate information. Those conducting interviews should be made aware that truth tellers do in fact make mistakes and give inaccurate information. Investigators’ should be careful when listening to interviewees accounts. If they hear information they know to be incorrect they should not immediately think the person is lying. Rather they should continue with their interview as planned and should evaluate the entire recall at the end of the interview.

Cues to deceit. The findings regarding how having an interpreter present affects cues to deceit elicited mixed results across the three experimental studies. In the first experimental study (Chapter 2) cues to deceit emerged in the native English condition and the non-native English condition but not in the two interpreter conditions. However, in the other two experimental studies (Chapters 3 and 4) cues to deceit emerged in all interview conditions (in Chapter 4 this was only the case before the MS
was played to interviewees). The difference in the findings could be explained by the different scenarios used in the studies. Participants in Chapter 2 were asked to lie or tell the truth about a job whereas participants in Chapters 3 and 4 were asked to lie or tell the truth about a mock secret meeting they viewed. An inspection of the $d$ scores revealed that there was a larger difference between liars and truth tellers in the mock secret meeting scenarios ($d = 1.06; d = 0.84$) compared to the job scenario ($d = 0.75$). Therefore, it is more likely that potentially subtle differences between experimental conditions were overshadowed by the main Veracity effect in the secret meeting scenario compared to the job scenario.

In the study reported in Chapter 2, liars in the non-native English speaking condition provided less detail than truth tellers, whereas no difference in detail between truth tellers and liars was found in the interpreter conditions. An explanation as to why non-native liars provided less detail in the interpreter absent compared to interpreter present condition is that they experienced a greater amount of cognitive load in the interpreter absent condition. Cognitive Load Theory puts forward that humans have limited mental resources. Lying in interviews is mentally taxing (Vrij, Fisher, Mann & Leal, 2008) and by speaking in a non-native language the mental resources of such interviewees are further depleted. As a result, liars were affected in this condition more than the truth tellers.

The study reported in Chapter 4 of this thesis found that after the MS there were no differences in the number of commissions (additional detail) between liars and truth tellers. As a result, the difference in detail between liars and truth tellers was not more pronounced after the MS than before the MS. Such a finding may be a result of the task that participants were asked to carry out in this study. Participants watched a video about a mock security meeting which discussed where to plant a spy device.
Liars were asked to lie about the site that was selected to plant a spy device and also to give a mixture of truth and lies about the device. It is likely that the task was too easy for liars. They watched a video filled with information and perhaps it was easy for them to come up with additional information, based on what they saw in the video. If participants were asked to lie or tell the truth about something more complex, truth tellers may have added more detail than liars after listening to the MS, as was predicted.

There was no difference in terms of cues to deceit between the modes of interpretation (short or long consecutive), seating position (next to, behind, or via the telephone), and level or English (low English proficiency or high English proficiency). What was found was that after the MS, truth tellers provided more detail than liars, for those interviewees who spoke through an interpreter with a low level of English revealed. However, there was no difference in detail between truth tellers and liars when interviewees who spoke through an interpreter had a high level of English ability. To the authors' knowledge there have been no studies, other than the ones presented in this thesis, which look at the effects that the presence of an interpreter has on cues to deceit. The findings from this thesis show a complex picture and further research is needed to examine this.

**Rapport.** The three experimental studies combined revealed that rapport was not affected by the presence of an interpreter. This supports the limited research in the medical area (Karliner, Pérez-Stable, & Gildengorin, 2004) and the opinions of practitioners (Russano, Narchet & Kleinman, 2014), but goes against the thoughts of investigators, who feel that presence of an interpreter damages rapport (Russano, Narchet, Kleinman & Meissner, 2014; Soufan, 2011). The investigators surveyed in Chapter 5 of this thesis also thought that the presence of an interpreter damaged
rapport. In two of the experiments (Chapters 2 and 4) rapport was not influenced by lying, yet Chapter 3 found that truth tellers experienced higher levels of rapport than liars. Furthermore, the mode of interpretation (Short or long consecutive), the seating position (interpreter next to interviewer, interpreter behind the interviewee, or via the telephone), and the level of English (high or low) did not have an effect on rapport.

The discrepancies between the findings in the studies and the practitioners’ views may be a result of the noticeable differences between our experiment and real-life intelligence interviews. Real-life interviews take considerably longer to conduct and the interruptions to the flow of conversation may have a negative effect in the longer term as the tolerance for interruptions may decrease over time. The levels of rapport experienced in this thesis could have been higher than the levels of rapport typically achieved in real life interviews due to the context of the experiment and its low stakes. Suspects, in real-life interviews, would be expected to feel more uncomfortable and possibly reluctant to talk, which in turn could have a negative effect on rapport.

In our experiments we asked interviewees about their experience of rapport whereas the other research (Russano, Narchet & Kleinman, 2014; Russano, Narchet, Kleinman & Meissner, 2014) refers to the rapport experienced by the interviewer. The presence of an interpreter may have different effects on interviewees and interviewers. Interviewers and interviewees may view the experience of having an interpreter present very differently. Interviewees may view interpreters in a more positive light because they (i) speak in their native language; (ii) listen in their native language resulting in a better understanding; and (iii) have time to think whilst the interpreter is interpreting their responses. Interviewers may view interpreters as being an inconvenience because they make the process longer and change the dynamics of the
interview. On the other hand, the presence of an interpreter may help the interviewer to establish rapport. To gain a level of trust, interviewers should engage with the language and culture of the interviewee (Fontana & Frey, 2000). Having an interpreter present will inevitably help interviewers understand the language and culture of an interviewee. So simply by having an interpreter present may be an inadvertent method of building rapport.

The studies in this thesis did not find that an interpreter affected rapport from the interviewee’s perspective. However, this does not mean that the addition of a different third party (e.g., a second interviewer) in an interview would not affect rapport from the interviewee’s perspective. An interpreter is ultimately there to help the interviewee and assist with their communication. A second interviewer is unlikely to be helpful to the interviewee. Police conduct suspect interviews with two interviewers, particularly for more serious crimes and for interviews with juveniles (Sim & Lamb, 2012). If the second interviewer does not also engage in rapport building or behaves in a negative way, they may affect the first interviewers’ rapport building attempts and subsequently affect interview.

Rapport is difficult to measure (Lavin & Maynard, 2001) and measuring its existence during interviews presents challenges (Vallano & Schreiber Compo, 2015). The studies in this thesis used a self-report questionnaire which measured the interviewee’s relationship with the interviewer. Despite the well-known limitations of self-report questionnaires, such as demand characteristics and social desirability biases (Vallano & Schreiber Compo, 2015), it is arguably more important to determine whether the interviewee experienced rapport rather than whether an observer thought rapport exists between the interviewee and interviewer, as this will likely be more relevant to investigatory outcomes.
The other method typically used to measure rapport in clinical settings is to ask independent raters to observe interviews and assess if rapport exists between the interviewer and interviewee (Grahe & Bernieri, 1999). This method helps to reduce the demand characteristics inherent within self-report questionnaires. However, using behavioural observations has limitations. The experience of rapport is subjective and only exists between the interacting parties (Tickle-Degnen & Rosenthal, 1990), thus the perceptions of independent observers may be different from the genuine feelings and experiences of the actual parties in the interaction. Furthermore, behavioural observation may provide insufficient information to accurately identify the presence or amount of rapport between interviewer and interviewee. Therefore, the reliance on independent observers to establish the existence of rapport may be misguided, and this technique should ideally be used only in combination with other measures of rapport-building.

**The survey study.** The overall findings of the survey study suggest an inconsistency in current procedural aspects of using an interpreter. There was no consistent response in the questions regarding who authorises an interpreter, whether official/unofficial interpreters are used, and which mode of interpretation is used (short or long consecutive or simultaneous). Furthermore, there is a lack of awareness regarding the possible effects of interviewing with an interpreter, including how interpreters affect the pace of the interview, rapport, and eliciting information. On the whole investigators had a positive feeling towards using an interpreter. However, three major problems arose from the survey: the time it takes to obtain an interpreter, the lack of interpreters for uncommon languages, and interviewees using interpreters as a delay tactic. The issue regarding the time it takes to obtain an interpreter and the lack of interpreters for uncommon languages may be overcome by the use of telephone
interpreting. The advantages of telephone interpreting mean that there is a reduced time delay as the interpreter does not have to travel to the police station. Furthermore, interpreters can be contacted all over the world via a telephone, which ultimately means that anyone can be contacted to speak in any language (as long as they have access to a phone). Although the telephone condition examined in Chapter 3 did not show telephone interpreting to have a negative effect on eliciting information, cues to deceit, and rapport, it is too early to suggest implementing such methods. However, future research should investigate the effect of telephone interpreting as this could be a valuable solution.

The inconsistency in the results given by those who took part in the survey was not surprising as to the author’s knowledge, constabularies in England and Wales do not offer any specific training for working with interpreters, and the guidance that officers in England and Wales receive appears to differ considerably across constabularies. However, the police officers surveyed all came from the same constabulary. Thus even within the same constabulary officers are not using the same procedures in terms of authorising the interpreter, the mode of interpretation, and the seating position. The inconsistency in mode used might be a result of whether the interviewee was with a suspect, victim or witness and the questions asked in the interview. The seating position may be a result of the persons present in the interview (e.g., it may be just the interview present or a solicitor/appropriate adult might also be present) or simply what feels more comfortable in the interview. Although the studies outlined in this thesis found no effect of mode of interpretation and seating position on eliciting information and rapport, it is clear that it is a complex picture with multiple aspects to consider.
Results showed that investigators were not aware that interpreters may impact interviews. As reported above, the majority of investigators did not believe the amount of information would be affected by the presence of an interpreter. This is of course true if we compare detail provided by those who speak through an interpreter and those speaking in a non-native language. However, it is not true if we compare those speaking through an interpreter to those speaking in their native language. Whilst more research is needed to determine the impact that interpreters have on investigative interviews, this survey highlights the importance of informing officers about the impact that interpreters may have on an interview as well as developing training programs for how to work effectively with an interpreter.

**Practical Implication**

The findings outlined in this thesis represent a first attempt at understanding the effect that interpreters have on eliciting information, cues to deceit, and rapport as well as understanding the effect of the mode of interpretation (short and long consecutive), the seating position of the interpreter (interpreter next to interviewer, interpreter behind interviewee, or outside the room via the telephone), and the level of English (low and high) of those speaking through an interpreter. At this stage it is too early to recommend that practitioners use a certain mode of interpretation or seating position as these need further exploration.

This area of research is in its infancy but is extremely important. Interpreters are used in every situation within investigative settings that require communication. Alongside police settings interpreters can be used in customs, education, medical and conference settings. The scope for using interpreters is vast. The findings regarding eliciting information and rapport contribute to investigative interviewing in the following ways:
**Eliciting more information.** In all of the experimental studies those speaking through an interpreter gave less information than interviewees speaking in their native language. This important finding should be highlighted to those interviewing with interpreters. There are disadvantages in real life interviews (involving victims, witnesses, or suspects) to not obtaining full and accurate information. Investigators may miss out on critical information that may otherwise have been volunteered if someone was speaking in their native language. Furthermore, there is less opportunity for differences to occur between truth tellers and liars when the amount of detail given is reduced. Providing a more detailed account can help truth tellers to prove their innocence. If liars provide more details it may cause them to reveal their lies or present new leads for the investigators to follow. Fully understanding the reasons why those who speak through an interpreter say less is paramount. Following this, practitioners and researchers would benefit from discussing research findings and developing techniques that encourage interviewees to say more when speaking through an interpreter, which can be easily implemented into the field. Such techniques should be rigorously tested in the laboratory and field to ensure their effectiveness and to reach the aim of an investigative interview, which is to elicit detailed, accurate information (Bull, 2010; Fisher, 2010).

**Rapport.** All three experimental studies revealed that rapport was not affected by the presence of an interpreter. This is an important finding for practitioners who believe that interpreters hamper rapport. Rapport building is seen as an important part of investigative interviewing which helps the interview in many ways. To know that the mere presence of an interpreter will enable this to continue is information that practitioners should know. This is not to say that if a different third party was present in the interview they might not damage rapport. An interpreter is different from a
second interviewer for example, who may damage rapport. Importantly, the interpreter is probably the only person in the police setting (when an interview takes place) who the interviewee can communicate with. As a result, they share language as well as culture (or at the very least the interpreter will have a good understanding of the culture). This along with the interpreter being impartial can only benefit the interview. As mentioned above, it is possible that the interviewer may think rapport is affected, but this does not mean that the interviewee also has this view. This is not to say that the interviewer’s rapport efforts should be dismissed by the interpreter. Interpreters should take care when interpreting any attempts that the interviewers make to build rapport. Interviewers may follow a deliberate style of rapport building e.g., asking questions in a certain format. These deliberate choices should be maintained by the interpreter. This, however, can be a difficult task if interpreters do not understand the interview process. It is not clear how much interpreters know about the police interview process and they thus may not pick up on the subtle word choices made by the interviewer. It may be beneficial to have interpreters attend police interview training so that they are better able to understand the process and the deliberate word choices/structures as well as interview techniques that interviewers use.

**Guidelines for Practitioners.** Whilst this area of research is in its early stages we would make a couple of recommendations to police offers and policy makers. Firstly, we would urge police officers to be cautious when using interpreters in investigative interviews. In particular, we would warn them of the possibility that they may not obtain as much information from interviews which utilise interpreters, compared to interviews with a native English interviewee. In light of this we would recommend interviewers employ strategies to gain as much information as they can. It is important to make sure the interviewee is aware that they should give as much information as
they can, no matter how small or unimportant they feel it is. As interviews with interpreters take longer, officers should make sure that the interviewees are aware that the interview will take longer and that they have enough time to conduct the interview without rushing. Secondly we would make policy makers aware that interpreters are not being used consistently. Following this they should develop policy based on evidence and ensure that this is taught throughout each constabulary to ensure best practice.

**Methodological considerations**

**Grasp of English.** One limitation of the three experimental studies was the method used to determine the grasp of English of the non-native interviewees. The level of English proficiency was measured with a scale from Embassy English. Three independent coders rated levels of English after the interviews took place. The non-native speakers who were interviewed without an interpreter were required to have a limited level of English. This was to reflect real life whereby they would struggle somewhat to speak English at interview. The English Embassy scale was chosen because it was easy to apply to real life settings. Additionally, the ratings given by the coders resulted in high inter-rater agreement and produced an objective rating to measure language skill. Of course, alternative language tests exist, such as IELTS (International English Language Testing System). These extensive tests which include a test for listening, reading, writing, and speaking, may not easily be applied to real-life settings. Future research should aim to obtain a level of English score before the interview and by a more recognised language test which is easy to apply.

**Cross-Cultural Confound.** The three experimental studies found that those who spoke in their native English language gave significantly more detail than those who spoke through an interpreter in their native language or in a non-native language.
From this we suggested that the limited detail was due to the interpreter being present and in the case of the non-native speakers their limited English. However, the difference may be attributed to the cultural differences between native English speakers and the other cultures used in the three studies and may not be the effect of the interpreter. It may be that English speakers generally give more information. Alongside this, participants in each of the experimental studies were not fully randomly allocated. Those in the native English condition included exclusion criteria so that language did not have an effect. However, as a result we cannot rule out that other factors may have influenced the results. To obtain a more accurate representation of the results a study whereby all participants are randomly allocated would be ideal. This could be achieved by having participants from all languages being randomly allocated to either being interviewed with or without an interpreter. The results would then allow us to full understand if interpreters do in fact make people provide less information.

**Different Languages.** In the three experimental studies a number of languages were used for the non-native speakers and those speaking through an interpreter (Korean, Chinese, Hispanic, Arabic, Urdu, and Russian). These languages were equally split across conditions so that language did not have an effect on the amount of information elicited. Unfortunately, this meant there was not a sufficient number in each language group to compare any effects across the different languages. Future research should investigate potential differences in the effect of interpreters on interviews in different languages.

**Rapport.** In all three experiments the interviewers actively tried to establish rapport with the interviewees. They were successful in this with rapport scores (as reported by interviewees) ranging from 4.50 to 5.52 on a 7-point Likert scale where 1 = not at all
and 7 = extremely. In none of the studies was there a control condition introduced in which no attempt was made to establish rapport. With hindsight such a comparison may have been useful. Perhaps the rapport levels in the experiments outlined in this thesis were too high to reveal differences between experimental conditions. However, adding a ‘no rapport’ control group would have doubled the already large participant sample sizes and establishing no rapport may be deemed unethical.

Survey Study. The survey study in this thesis was only conducted on a small number of police investigators in one constabulary in England. Therefore, the results of this study cannot be generalised to all of the constabularies in England and Wales. Additionally, the overall positive feeling that officers had towards interpreters may have been the result of a biased sample. That is, those investigators who were not so positive about using interpreters may not have responded to the request to complete the questionnaire. A larger sample would be needed to gain a better understanding of the picture surrounding thoughts of using interpreters.

Future Research

The research area surrounding interpreters is in its early stages and there is still a lot of work to do to understand the processes and outcomes involved. A number of future research ideas have already been discussed throughout this thesis. Chapter 2 suggested investigating (i) the relationship between the interviewer and interpreter, (ii) the effect that the interpreters experience has on rapport with the interviewee, (iii) the different effect that rapport has from the perspective of both the interviewer and the interviewee, and (iv) if short consecutive interpretation leads to less loss of information than a long consecutive translation. Chapter 3 suggested investigating (i) whether sitting behind the interviewee made the truth tellers more uncomfortable and thus make more mistakes, and (ii) the effect of simultaneous interpreting. Chapter 4
suggested investigating (i) liars strategies for the amount of correct and incorrect information given in an interview, and (ii) the different aspects that may affect rapport in interpreter mediated interviews. Finally, Chapter 5 suggested examining the time wasting strategies used by suspects who call an interpreter when they do not need one.

As this thesis was the first attempt at looking at the effect of interpreters on eliciting information, cues to deceit, and rapport more research should investigate these to support or oppose the findings. Some further future research ideas include:

**Eliciting information from those speaking through an interpreter.** Although the model statement (MS), used in the study reported in Chapter 4, helped those who spoke through an interpreter give more additional information, this information did not match the amount of information that was given by their native English speaking counterparts. Future research should investigate the reasons why people say less when speaking through an interpreter and ways in which more information can be elicited from this group. Chapter 3 asked interviewees about their experiences using an interpreter but did not give conclusive answers. The study did find that the interviewees were positive about using an interpreter and there is no reason to believe that this would differ in a real life setting. One possible explanation as to why interviewees say less is the increase in time within an interview requiring an interpreter. This was not examined in this thesis but is a valid explanation and warrants investigation.

Furthermore, in the present thesis no condition was included in which non-native speakers were interviewed in their native language without an interpreter. Native English speakers, speaking in English were used in all studies as a control group. This control group was used because it is an interesting comparison from an applied perspective. That is, English speaking interviewers are interested in how the
responses delivered by non-native speakers, who either speak in English or in their native language through an English speaking interpreter, compare to the responses of native English speakers. A condition which involves non-native English speakers being interviewed in their native language without an interpreter could be included in future research. If interviewees give more information when speaking in their own language than with an interpreter, the reduced detail obtained through an interpreter would be a result of the interpreter, whether that is due to the interruptions impairing performance, the increased time involved, or something else. However, if those speaking in their native language produce a similar amount of detail compared to those speaking in the same language but through an interpreter, then the reduced detail that is obtained (in both conditions) would potentially be a result of interviewees’ language and not due to the interviewee speaking through an interpreter.

**Interviewers’ strategy.** In the questionnaire study (Chapter 5) officers were asked how the pace of the interview might be affected when an interpreter is present. Two investigators did not think the interpreter affected the time taken to conduct the interview whilst the remaining 52 investigators said that having an interpreter present slowed the interview down. It is possible that investigators change their interview strategy when dealing with interpreters to make the interview ‘easier’, e.g., by shortening the questions or asking more closed questions. This thesis showed that interviewees are more concise when an interpreter is present, but perhaps interviewers also change their style (to save time) and this may have also resulted in reduced information being obtained from an interview. Research should investigate whether interviewers do in fact change their strategies when an interpreter is present and what, if any, the effect might be on the amount of information elicited.
Non-verbal cues to deceit. This thesis focussed on verbal cues to deceit as these have primarily been more reliable than non-verbal cues to deceit. However, the previous non-verbal research has investigated dyadic interactions (see DePaulo et al., 2003; Vrij, 2008 for a review) and neglected triadic interactions. Due to the change in social dynamics when additional people are brought into the interview setting it may be that unreliable cues to deceit in dyadic interviews (e.g., eye contact) are more reliable in a triadic interview. Recent research looking into the effect that a second interviewer has on cues to deceit found that, compared to truth tellers, liars made more eye contact with the speaking interviewer than to the second silent interviewer and to elsewhere in the room (Mann et al., 2012), a finding that opposes the stereotypical view that liars look away from an interviewer (Strömwall, Granhag, & Hartwig, 2004). Thus future research should investigate non-verbal cues to deceit in interviews with interpreters.

Conclusion

Research to date has neglected to investigate how interpreters affect investigative interviews. This thesis aimed to examine the effect that interpreters have on eliciting information, cues to deceit, and rapport. The thesis presents three important findings. First, those who speak through an interpreter provide less information than those speaking in their native language and the same amount of information as those speaking in a non-native language. Second, interpreters do not affect rapport as far as the interviewee is concerned. Finally, police officers are not aware of the impact that interpreters have on an interview. The findings are an important first step in understanding the impact that interpreters have on investigative interviewing.
References


225


Appendices

Appendix 1

Experiment 1: Interview schedule

1. What is your job? How many hours a week?
   
   *Sorry, my name is Sharon/Sam by the way and I am a research fellow here in the department.*

2. How long have you been in your job?

   *I’ve been here ten years now……although it feels like 50 on some days!*

3. Where do you work?

   *I work here some days but I prefer to work at home as much as possible.....anyway back to the questions.....*

4. Please describe your place of work in as much detail as you can. Where appropriate, discuss where your desk is, colleagues’ desks, supervisor/supervisee’s desks, any tea-making or kitchen facilities, toilets, any communal areas. If any of the above details are irrelevant (i.e. your boss works in another building) then please explain.

5. There must be one single experience in your job that must stand out. What is that? What happened?

6. Can you describe a typical day at work/shift, hour by hour?

7. Can you tell me about a recent interaction or event that you were involved in within the last week that occurred in your workplace? Just something that springs to mind, but doesn’t have to be out of the ordinary, but please do describe it in detail.

8. If you were training me to do your job for a day, what things would I need to know about?

9. Describe your boss. How much contact do you have? What do they do that you don’t?
Appendix 2

Experiment 2: Interview schedule

1. I’d like to start with you recalling what happened during the meeting. That is, starting from the moment the video started; please describe to me what happened from that point onwards until the end of the meeting.

Now we would like to talk to you about the site that won the vote. Please try to provide as much detail as you can to the following questions:

2. I would like you to describe what it looked like from the inside, including the exact location where the device would be planted?

3. Why was this site thought to be suitable?

4. Is there any information you wish to add about this site?

5. Moving on to the device, first I would like you to describe for me what the device looked like, that is, all of its physical features.

6. Now, please can you tell what the device can do, that is, all of its technical features.

7. Is there any information you wish to add about the device?

8. I’d now like you to recall what happened during the meeting in reverse chronological order. That is, starting from the moment the meeting ended, please describe to me what happened from that point backwards until the beginning of the video.

9. I now want to turn the focus back to the device. I want to you describe for me again what the device looked like, that is, all its physical features, but this time I want you to close your eyes when you do so. Research has shown that closing your eyes can help with memory recall. So, closing your eyes before you answer, please can you provide me with a detailed description of the device’s physical features?

10. And now, with your eyes closed, please can you tell what the device can do, that is, all of its technical features?

11. Is there any information that you can give me that perhaps I haven’t asked you about that may be useful to me or help me in any way?
Appendix 3

Experiment 3: Interview schedule

1. I’d like to start with you recalling what happened during the meeting. That is, starting from the moment the video began; please describe to me what happened from that point onwards until the end of the meeting?

Now I would like to talk to you about the site that won the vote and the device. Please try to provide as much detail as you can to the following questions:

2. I would like you to describe what the site that won the vote looked like from the inside, including the exact location where the device would be planted?

3. Could you also describe to me what the device looked like and all the technical features?

I am now going to play you a section of a model statement. Please listen to the amount of detail reported in the account. Following this I will ask you some more questions. When answering these questions I would like you to try to be as detailed as the person in the model statement was.

PLAY MODEL STATEMENT.

4. Remembering how much detail was in the model statement I would like you to again recall what happened during the meeting. That is, starting from the moment the video began; please describe to me what happened from that point onwards until the end of the meeting?

5. Again remembering the amount of detail provided in the model statement, I would like you to describe what the site looked like from the inside, including the exact location of where the device would be planted?

6. Could you also describe to me what the device looked like and all the technical features?

7. Please recall in as much detail as possible what was said in the model statement?
Appendix 4

Experiment 3: Transcripts for the Blue Pool and Formula 2 Model Statements

Blue Pool model statement

OK. Erm we, go on a beach holiday to the same place every year, and that’s myself and my grown-up children. Err. It’s kind of a tradition and we always have to visit the Blue Pool, because it’s their favourite. It scares the living daylights out of me but they love it! The Blue Pool is like a giant rock pool that’s left when the tide goes out, so it’s circular in shape. And they can jump off of the rocks at varying heights into this, apparently bottomless, pool of freezing cold water. And they like that. So we arrive by coming along the sand dunes at the top, so it’s like a cliff. Erm, it’s a mixture of sand and rock. And to get down to the Blue Pool it’s like you have to be a bit like a mountain goat cause it’s rather a thin track that snakes down and you have to do half of it on your…backside. Erm. When you get to the end of it, you can go the long way round, and have a gentle sort of, climb across the rocks or you come to a, drop of about six feet which, is the way we always choose to go. We walked a few yards over to the Blue Pool. And the children climbed up…to start jumping in, my daughter decided not to go in, but my boys, three boys, jumped in. On the edge of the beach there were a load of starfish where the sea had come in and the tide had started to go out and it just deposited literally hundreds of these starfish, which is something I’ve never seen before.

Formula 2 model statement

Ok, well I work for a company that sponsors a formula 2 driver called Tom Gladys and I was invited to the grid to watch him race.
When I stepped onto the grid the first thing I saw was the safety car, an Audi, then behind that the 22 pit girls who hold up the drivers name boards in front of the grid position; so that when the drivers come in they know exactly where to pull up for the pre-race checks.

So I was walking down the middle of the grid but I was advised to go to one side as the cars were coming in, so’s not to get run over! I remember looking at the grandstand on my right - there were a lot of people stood there watching the grid. I walked towards position 11, which is where Tom was located. I remember looking closely at some of the pit girls which you would as a man😊 At this point I got out my phone to do a bit of filming as it’s not every day that you get to be on the grid at a formula 2 race! I was trying to captivate the feel of it in the video. Just then, I saw Tom pull up in his formula 2 car, he was in full risk gear with his helmet on. You can’t speak to him then as he’s getting focussed for the race. So I just stood in front of the car and had a good look at everything there which was quite nice. I remember one of the mechanics taking off the front hydraulics to make some slight adjustments to those.
Appendix 5

Experiment 4: Hardcopy of questionnaire

Interviewing non-native speakers

The purpose of the current research is to learn more about interviews with non-native speakers.

For the sake of this questionnaire:

Interviewee refers to a suspect, victim or witness

Interview refers to a formal communication within a private room between an interviewer and an interviewee to gather information/evidence.

A non-native speaker refers to a person for whom English is not their first language, and whose level of English is very basic and their ability to communicate and understand English is limited.

Information about you

1. Age…………………………

2. Gender………………………

3. Ethnicity……………………………………………………………………

4. Occupation………………………………………………………………

5. Rank/Position ……………………………………………………………

6. Years of interviewing experience…………………………………………
7. What interview training have you received?

.................................................................

**Interviewing non-native speakers**

8. What percentage of the interviews that you conducted in the last year, were with non-native speakers? (See the first page of this form for the definition of a non-native speaker)


9. Interviews with non-native speakers, when compared to native speakers, are:

(Please circle one)

<table>
<thead>
<tr>
<th>More difficult to conduct</th>
<th>Less difficult to conduct</th>
<th>No difference</th>
</tr>
</thead>
</table>

10. What strategies (in terms of questions asked) do you use to obtain information from non-native speakers?

........................................................................................................................................................................

........................................................................................................................................................................

........................................................................................................................................................................

11. Have you had any training in using interpreters? (Please circle one)  

Yes / No

12. If yes, please state what training.

........................................................................................................................................................................

........................................................................................................................................................................

........................................................................................................................................................................

13. Whose decision is it to call an interpreter?

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........................................................................................................................................................................

........................................................................................................................................................................

14. When would an interpreter be called?
15. What is the protocol for obtaining an interpreter?

16. How much information is given to the interpreter, about the nature of the interview, before the interview starts? (Please circle one)

| No information | Some information | All of the information |

17. Have you ever conducted interviews using interpreters? (Please circle one)
Yes / No

18. What percentage of the interviews that you conducted in the last year, were with interpreters?

……………….%

19. When was the last time that you used an interpreter?

…………………………………………………………………………………………
…………………………………………………………………………………………

Please circle one response for each of the questions below:

20. Do you use interpreters for

| Suspects? | Witnesses? | Both? |

21. Do you use official interpreters (e.g., government employees, consultants)?

| 1 | 2 | 3 | 4 | 5 |
22. Do you use unofficial interpreters (e.g., colleagues, interviewees’ family members)?

<table>
<thead>
<tr>
<th>Never</th>
<th>On rare occasion</th>
<th>Sometimes</th>
<th>Often</th>
<th>Always</th>
</tr>
</thead>
</table>

23. The interpreter sits next to you (the interviewer), facing the interviewee.

<table>
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<tr>
<th>Never</th>
<th>On rare occasion</th>
<th>Sometimes</th>
<th>Often</th>
<th>Always</th>
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</table>

24. The interpreter sits behind the interviewee.

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<tr>
<th>Never</th>
<th>On rare occasion</th>
<th>Sometimes</th>
<th>Often</th>
<th>Always</th>
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</table>

25. The interpreter interprets via the telephone.

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<th>Never</th>
<th>On rare occasion</th>
<th>Sometimes</th>
<th>Often</th>
<th>Always</th>
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</table>

26. The interpreter repeats what the interviewee says sentence by sentence.

<table>
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<tr>
<th>Never</th>
<th>On rare occasion</th>
<th>Sometimes</th>
<th>Often</th>
<th>Always</th>
</tr>
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</table>
27. The interpreter repeats what the interviewee says once he or she has finished answering the question.

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<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
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28. The interpreter uses a combination of repeating what the interviewee says sentence by sentence AND repeating what the interviewee says after he or she has finished answering the question, in the same interview.

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29. The interpreter interprets simultaneously (i.e., he or she talks whilst the interviewee talks).

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Having to call an interpreter makes you feel

30. Annoyed

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31. (Comment if required)………………………………………………………………………
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32. Relieved

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33. (Comment if required)…………………………………………………………………………………………………………………………………………………………

34. Frustrated

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35. (Comment if required)…………………………………………………………………………………………………………………………………………………………

36. Reassured

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37. (Comment if required)…………………………………………………………………………………………………………………………………………………………
38. Suspicious about the interviewee

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39. (Comment if required)………………………………………………………………………
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40. Having an interpreter typically affects the interview by

- Speeding the interview up.
- Slowing the interview down.
- It has no effect on the interview.

41. The interpreter typically affects rapport building with the interviewee by

- Helping rapport building.
- Hindering rapport building.
- It has no effect on rapport building

42. The interpreter is typically

- On the side of law enforcement.
- On the side of the interviewee.
- Neutral.

43. Do you get the maximum amount of information from an interview when using an interpreter compared to when you interview a non-native speaker without an interpreter?

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44. Do you get the same amount of information from an interview when using an interpreter, compared to when you interview a native speaker without an interpreter?

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45. The interpreter adds information to the interviewee's account as they see fit

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46. When using an interpreter, it is typically

| Easier to judge the credibility of the interviewee. | More difficult to judge the credibility of the interviewee. | It makes no difference. |

47. When using an interpreter the interviewee typically

| Provides more detail. | Provides less detail. | It makes no difference. |

48. Interviewees get annoyed by the interpreters’ interruptions.

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49. Interviewees say more when using an interpreter because they have plenty of time to think during the interview.

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50. Interviewees say more when using an interpreter because language is not a barrier.

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51. The presence of an interpreter makes the interviewee limit themselves to the core areas, to prevent the interview from becoming too long.

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When an interpreter is speaking, in the interview, the interviewee is

52. Thinking about what to say next.

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53. Listening to the interpreter.

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54. Distracted and thinking about something else.

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55. Monitoring the interviewer’s reactions.

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56. Monitoring their own reactions.

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57. Interruptions from the interpreter make it

| Easier for the interviewee to remember. | More difficult for the interviewee to remember. | They make no difference. |
If you have any further comments or observations regarding interviewing non-native speakers or using interpreters please add them here.

Thank you very much for your time.
Appendix A

Evidence of favourable ethical review for Experiment 1

Part C  Administrative Information for Departmental Committee Review

This Ethics submission is for (please tick one of the following two options):

1) Full review for the first time
2) Expedited review (please tick one box)
   □ A revision in response to Ethics Committee feedback. Please attach an additional sheet that details your responses to the concerns listed previously, along with the original submission.
   □ Modification of already approved project – attach full previously approved proposal with a list of modifications or changes on a separate sheet
   □ Practicals (1st and 2nd yr undergrad)

Checklist for expedited and full reviews: Check that each of the following documents is enclosed with this form:

X Response to the items 1-20,
X RESEARCH PROPOSAL,
X Recruitment Information (e.g. letters to parents, information sheet, Participant Pool poster, if applicable),
X Informed Consent Form (required),
X Debriefing Form (required),
X All questionnaires/interview schedule – (if applicable).

Decision of Ethics Committee:

□ Favourable opinion

✓ Favourable opinion with provision [make the changes indicated on the proposal – no need to resubmit].

Attached note – please let us know before data collection.

□ Unfavourable opinion - consult with your supervisor, tutor or mentor to rectify or address the concerns noted on the proposal, then resubmit following the instructions below.

□ No opinion possible [some of the required information is missing – see proposal for details and resubmit following the instructions below]

Signed: Claire Nee (also reviewed by Jim Smith)

Date: 12/9/12

N.B. Revised proposals should be submitted by email to the member of the ethics committee that forwarded you your initial decision (usually Claire.nee@port.ac.uk or Maggie.linnell@port.ac.uk). You do not have to wait for the next ethics committee deadline. Remember to tick the first box under 2 above and include (i) the original submission, (ii) the revised proposal (clearly titles as such), and (iii) a list of your responses to the feedback.

P.S. The DPEC process has not gone live yet so we are reviewing this in-house.
Appendix B

Evidence of favourable ethical review for Experiment 2

Faculty of Science
University of Portsmouth
St Michael’s Building
White Swan Road
PORTSMOUTH
PO1 2DT

Date 15/10/13

FAVOURABLE OPINION

Proposal Title: The effect of an interpreter on rapport, information eliciting and cues to deceit.

Dear Sarah,

Thank you for submitting your revised protocol for ethical review. The proposal has been reviewed, and has received a favourable opinion.

Thus, no further action is required on your part.

Good luck with the study.

Best wishes,

Dr Jim Sauer
Psychology rep, Science Faculty Ethics Committee

CC -
Dr Chris Markham – Chair of SPEC
Sci.fac@port.ac.uk
psychologycourseadmin@port.ac.uk
Appendix C

Evidence of favourable ethical review for Experiment 3

Study Title: ‘Interviewing non native interviewees’
Reference Number: SFEC 2014-046a (Please quote this in any correspondence)

Thank you for resubmitting your application to the Science Faculty Ethics Committee (SEFC) for ethical review following the 1st SFEC review dated 23/09/2014, in accordance with current procedures9.

I am pleased to inform you that SFEC was content to grant a favourable ethical opinion of the above research on the basis described in the submitted documents listed at Annex A.

Please note that the favourable opinion of SFEC does not grant permission or approval to undertake the research. Management permission or approval must be obtained from any host organisation, including the University of Portsmouth or supervisor, prior to the start of the study.

Wishing you every success in your research

Yours sincerely,

Sarah Ewens
Sarah.ewens@port.ac.uk
T: 023 9284 3379
ethics-sci@port.ac.uk
Date 23/09/2014

FAVOURABLE ETHICAL OPINION

9 Procedures for Ethical Review, Science Faculty Ethics Committee, University of Portsmouth, October 2012 (to be updated).
Dr Chris Markham  
Vice-Chair Science Faculty Ethics Committee  

Information:  
Holly Shawyer - Faculty Administrator  

Statement of compliance  

SFEC is constituted in accordance with the Governance Arrangements set out by the University of Portsmouth  

After Ethical Review  

If unfamiliar, please consult the advice After Ethical Review which gives detailed guidance on reporting requirements for studies with a favourable opinion, including, notifying substantial amendments, notification of serious breaches of the protocol, progress reports and notifying SFEC of the end of the study.  

Feedback  

You are invited to give your view of the service that you have received from the Faculty Ethics Committee. If you wish to make your views known please contact the administrator at ethics-sci@port.ac.uk  

ANNEX A Documents reviewed  

The documents ethically reviewed for this application (SFEC 2014-046a)  

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<thead>
<tr>
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<th>Date</th>
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<td>09/09/2014</td>
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<td>1</td>
<td>13/06/2014</td>
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<tr>
<td>EWENS PROTOCOL v2</td>
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<td>28/07/2014</td>
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<td>09/09/2014</td>
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<tr>
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<td>1</td>
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<td>Sarah Ewens SFEC Ethical Review 14.10.13</td>
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Appendix D

Evidence of favourable ethical review for Experiment 4

Faculty of Science
University of Portsmouth
St Michael’s Building
White Swan Road
PORTSMOUTH
PO1 2DT

Address   Department of Psychology
Date       11th September 2014

FAVOURABLE OPINION

Protocol Title:  Interviewing non native interviewees
Date Reviewed:  11 September 2014

Dear Sarah,

Thank you for resubmitting your protocol for ethical review and for the clarifications provided.

Your responses have been reviewed and I am pleased to inform you that the amendments to your application has been given a favourable opinion by the Science Faculty Ethics Committee. Please notify us in the future of any other substantial amendments that may be required and send us a final study report.

Good luck with the study.

Dr Paul Morris
(Dept) Science Faculty Ethics Committee

CC -
Dr Chris Markham – Chair of SFEC
Dr Jim House – Vice Chair of SFEC
Holly Shawyer – Faculty Administrator
Appendix E

Completed UPR16 Form

FORM UPR16
Research Ethics Review Checklist

Please include this completed form as an appendix to your thesis (see the Postgraduate Research Student Handbook for more information).

Postgraduate Research Student (PGRS) Information

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<tbody>
<tr>
<td>Student ID:</td>
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<tr>
<td>Name:</td>
<td>Sarah Ewens</td>
</tr>
<tr>
<td>Department:</td>
<td>Psychology</td>
</tr>
<tr>
<td>First Supervisor:</td>
<td>Prof. Aldert Vrij</td>
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<td>Start Date:</td>
<td>01.10.12</td>
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<td>Study Mode and Route:</td>
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Title of Thesis: The Effect of Interpreters on Eliciting Information, Cues to Deceit, and Rapport

Thesis Word Count: 58,194

If you are unsure about any of the following, please contact the local representative on your Faculty Ethics Committee for advice. Please note that it is your responsibility to follow the University’s Ethics Policy and any relevant University, academic or professional guidelines in the conduct of your study.

Although the Ethics Committee may have given your study a favourable opinion, the final responsibility for the ethical conduct of this work lies with the researcher(s).

UKRIO Finished Research Checklist:
(If you would like to know more about the checklist, please see your Faculty or Departmental Ethics Committee rep or see the online version of the full checklist at: http://www.ukrio.org/what-we-do/code-of-practice-for-research)

a) Have all of your research and findings been reported accurately, honestly and within a reasonable time frame? YES ☒ NO ☐
b) Have all contributions to knowledge been acknowledged? YES ☒ NO ☐
c) Have you complied with all agreements relating to intellectual property, publication and authorship? YES ☒ NO ☐
d) Has your research data been retained in a secure and accessible form and will it remain so for the required duration? YES ☒ NO ☐
e) Does your research comply with all legal, ethical, and contractual requirements? YES ☒ NO ☐

Candidate Statement:
I have considered the ethical dimensions of the above named research project, and have successfully obtained the necessary ethical approval(s)

Ethical review number(s) from Faculty Ethics Committee (or from NRES/SCREC): __________

If you have not submitted your work for ethical review, and/or you have answered “No” to one or more of questions a) to e), please explain below why this is so:

Signed (PGRS): __________ Date: 21.09.15

UPR16 – August 2015