Help or Hindrance?
The Impact of Two Different Methods when Interpreting Witness Recall in Police Interviewing

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Abstract

In recent years, Europe has been experiencing large waves of immigration. The need for using interpreters has thus increased across many jurisdictions from police interviewing to refugee information gathering. The question of how interpreters can be utilised in these police interview settings to obtain sufficient material in terms of quality and quantity remains undetermined, yet gathering reliable information from witnesses or victims of crimes is essential to any police investigation. This study investigates how two different interpreting methods impact the free recall segment of an investigative interview. A group of 80 participants (20 with English as their first language and 60 Polish participants with English as their second language) viewed a short film of a staged burglary with English and Polish features. Subsequently, the participants took part in an interview in order to describe what they witnessed in one of four conditions: (i) Native English speakers recalling in English (no interpreter control condition), (ii) Native Polish speakers with an intermediate level of English recalling in English (no interpreter control condition), (iii) Polish speakers recalling in Polish through an interpreter using consecutive interpretation (as used in most police investigative interviews; where the interviewee speaks, stops and the interpreter interprets the recall- this happens multiple times throughout the free recall of the interviewee); and (iv) Polish speakers recalling in Polish using a simultaneous interpreting method (interpreting at the same time that the speaker is speaking but the interpreter is located in a different room).

The analysis concerned two key areas: (i) The quantity and quality of the interviewee’s free recall, and (ii) the accuracy of the interpreting. Participants recalling information in English (their first language or a second language) recalled more details than participants using an interpreter (i.e., both interpreting conditions). Interviewees talking through an interpreter using a simultaneous interpreting method elicited more details in a shorter amount of time. The simultaneous interpretation was thought to be less accurate in comparison to the consecutive interpreting. The interpreter’s work experience and accumulated event knowledge gained from assisting several witnesses in recollecting the same situation affected interpreting accuracy. The overall findings suggest that witnesses presently do not elicit the amount of evidence they potentially could when using the current police interpreting method. With more research, the modified simultaneous interpretation method could prove to be a more suitable interpretation method than the present police interpreting technique.
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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.

Anita Grzybek

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Abbreviations

CP – Change Perspective
CR – Context Reinstatement
CI – Cognitive Interview
ECI – Enhanced Cognitive Interview
ESL – English as Second Language
PACE – Police and Criminal Evidence Act
RE – Report Everything
RI – Remote Interpreting
RO – Reverse Order
SL – Source Language
TBR – To-Be-Remembered
TL – Target Language
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Dissemination


Chapter 1: Introduction

As the world becomes a smaller place, and the global economy continues to grow, more and more criminal investigations involve people who come from different countries and speak different languages. If communication problems are common for people who speak the same language, then how much more so for people who have different language backgrounds? Immigrants who settle in the UK and do not converse well in English - or do not speak the language at all - can experience staggering barriers. Any linguistic limitations they have become especially prominent in situations where they must give testimony as a result of witnessing or being a victim of a crime. As one might suspect, interviewing a witness through an interpreter is not the same as directly questioning a witness. Exchanging information between languages is always about negotiation and clarification of meaning. The potential for significant interpretive error and miscommunication increases if a particular context is not clarified. In fact, moving back and forth between languages substantially increases the risk of potential misunderstandings, confusion, or error (Cronheim & Schwartz, 1976).

When it comes to the criminal justice system, lack of clarity can have profound consequences. The connotations of words serve as critical elements of any investigation. The involvement of a foreign speaker in police interviews has the potential to abstract the effectiveness of that interview (Gibbons, 2001). In such situations, an interpreter comes to facilitate the exchange of meanings. Scholars have begun to examine cross-cultural legal interactions (Berk-Seligson, 2017, 2009, 2000; Lai, 2016; Nakane, 2014, 2009, 2007; Heydon, 2005; Krouglov, 1999) and have demonstrated the enormous multi-layer role played by an interpreter (Roy, 2000, 1996; Wadensjo, 1998). Their research findings suggest that the interpreter's function goes beyond merely interpreting. Linguists guide and direct turns at the exchange, initiate responses for clarification and respond to questions directed at them (Roy, 2000; Wadensjo, 1998). A well-trained and experienced interpreter can build a bridge across the communicative chasm (Miletic, Piu, Minas, Stankovska, Stolk & Klimidis, 2006).
The interpreter, though, can also change the dynamic of the interview or hinder usage of an interviewing technique (Lai & Mulayim, 2014; Nakane, 2014; Russell, 2005). The presence of an interpreter seems to affect witnesses' memory, and this becomes an additional factor impacting the success of the interview (Boser, 2013). The relationship between the witness' and the victim's memory and the implemented interpreting technique appears to be under-researched. This aspect of the police interview deserves careful attention, given its potential to influence the outcome of an investigative interview. The research presented below tackles this knowledge gap and investigates what ways the presence of an interpreter and utilisation of a particular interpreting method during police interviews influences a foreign speaker's memory.

Definitions

Given the central role professional interpreting plays in this thesis, it is necessary to define it clearly. The process of interpretation refers to the act of transferring meaning orally from one language to another. It is a rather highly specialised and challenging practice. The domain of interpreting involves performing multiple cognitive tasks, sometimes simultaneously. This means that an interpreter has to decide in an instant meaning of an utterance in one language, hold the message in short-term memory, and then convey it promptly in another language. On an additional note, police interpreting includes the full spectrum of interpreting conducted during law enforcement officers' investigations, but it does not include interpreting court and tribunal hearings. As such, researching interpretation in these two areas goes beyond the limits of this study. Finally, in this study, the terms ‘linguist’ and ‘interpreter’ will be used interchangeably.

Background

This research mainly focused upon the jurisdictions of England and Wales, countries of immigration that offer government-funded interpreting or translating services to individuals who access public services but are not proficient in English. As such, it is
worth providing a snapshot of the multilingual composition of the country to set the setting of the study.

In 2015, around 1 in 8 (13.3%) individuals in the UK were born abroad (8.6 million). Two-thirds of them were born outside of the EU (5.4 million), and one-third were born inside the EU (3.2 million; Office for National Statistics, 2016). Poland in particular contributed heavily to these statistics. In 2015, Polish people were the most common non-British ethnic group in the UK with an estimated 916,000 residents (16.5% of the total non-British national population of residents in the UK; Ibid). Furthermore, data from the 2011 Census shows that 7.7 percent of the foreign population (4.2 million people) were using languages other than English for most communication purposes (Office for National Statistics, 2013). From this cluster, 726,000 people (1.3%) could not speak English well, and 138,000 people (0.3%) could not speak English at all. The need for using interpreters has thus become a paramount necessity across many jurisdictions, including social services, refugee services, and the legal court system. By 2015 the number of completed interpreting and translating service requests regarding criminal cases reached 87,315 (Ministry of Justice, 2017). Taking into consideration the statistics above, it is likely that interpreted-mediated interviews will continue to be an essential part of the British Criminal Justice System, warranting the need for closer examination of these interviews. As the Polish people represent the largest ethnic cluster in the UK, it was decided to examine the interpreter-mediated interviews with Polish eyewitnesses.

The Rationale of the Research

Police interviewing is one of the most common and essential law enforcement activities (Milne & Bull, 2006). The legal forces depend on the interviewing process as the principal avenue for gathering information and establishing facts (Schollum, 2005). Although some police officers have an opinion that witnesses rarely provide adequate evidence (Krix, Sauerland, Clemens, Rispens, 2015; Kebbell & Milne, 1998), the majority of inner leads are obtained during eyewitness or victim interviews (Berresheim & Weber, 2003; George & Clifford, 1992). The process of investigative interviewing may seem somewhat stressful for a witness or victim of a crime, especially in the immediate aftermath of an incident. Hence, the process of gathering evidence and the way law
enforcement handles it is fundamental. Pescod et al. (Pescod, Wilcock, & Milne, 2013) point out that the initial questioning during an interview influences the future of the entire investigation. The police interview might be the witness' first opportunity to recall what happened when s/he observed the law-breaking scene. Research further indicates that memory is likely to be the most complete, accurate, and uncontaminated during the earliest moments of memory retrieval (Mackay & Paterson, 2015; Wixted & Ebbesen, 1997).

Over the past few decades, extensive research in the field of investigative interviewing has resulted in the development of cognitive interviewing (CI), a technique that focuses on enhancing the interviewee’s ability to recall details about a witnessed incident (Geiselman, Fisher, MacKinnon, & Holland, 1985; Fisher & Gaselman, 1992; Geiselman & Fisher, 1997; Kebbell, Milne, & Wagstaff, 1999; Fisher, Milne, & Bull, 2011). The CI technique has proven to be an effective way of yielding the most accurate and detailed evidence in investigative interviews compared with other methods (Gibbons, 2007; Gudjonsson, 1992). However, the CI technique has a few shortcomings: it requires training, is far more time consuming than the standard interview, and as the witnesses recall more detailed testimonies the number of incorrect pieces of information increases (Koehnken, Milne, Memon, & Bull, 1999). Here, the control of the questioning is passed from the interviewer to the interviewee, which allows the respondent to immediately elicit as much detail as possible from the beginning of the interview. This part of the interview is known as the free narrative account (Fisher & Geiselman, 2010).

It is generally accepted that the free narrative provides approximately one third to one half of all information elicited during the whole interview with a cooperative individual (Milne & Bull, 2003). Thus, this segment constitutes a significant part of the questioning. The most critical element of the phase is allowing an interviewee to speak continuously at a relaxed pace and in their own words without any interruptions or questions. However, the extent to which the free recall can be applied in a police interview aided by the interpreter is questionable. When an interpreter is involved in the interview process, rendering the narrations segment by segment and applying the same CI principles to monolingual interviewees (that is, to yield free-flowing narration) without avoiding disruptions is impossible. The interpreters' participation in the free recall phase appears to conflict fundamentally with the cognitive requirements of applying the cognitive interview
(Heydon & Lai, 2013) as the interjection of the linguist disturbs the flow of the narrative. Hence, this raises the question: how do the interpreter's interpreting disruptions affect the interviewee's conscious effort of searching their memory to recall information?

To this day, research of police interviewing has focused primarily on monolingual settings with native speaker suspects or witnesses (Gibbons, 2007; Wright & Holliday, 2007; Fisher, Geiselman, & Amador, 1989), older adult populations (Holliday, Humphries, Memon, Milne, Houlder, Lyons, & Bull 2012; Wright & Holliday, 2005; Fisher & Geiselman, 1992), adults with intellectual disabilities (Clarke, Prescott, Milne, 2013; Wright & Holliday, 2007), or with children (Milne, Sharman, Powell, & Mead, 2013; Holliday, 2003; Milne & Bull, 2003). Surprisingly, the research of police interviews with foreign language speakers has been given little consideration by scholars (Ewens, Vrij, Leal, Mann, Eunkyung, Shaboltas, Ivanova, Granskaya, & Houston, 2016; Ewens, Vrij, Leal, Mann, Jo, & Fisher, 2014; Eades, 2003) Research has focussed more on the suspects of a crime (Nakane, 2007; Pavlenko, 2008; Berk-Seligson, 2009; Roy, 1996) or concentrated on courtroom settings (Berk-Seligson, 2017; Hale, 2007), giving little attention to the subcategory of police interpreting (Ewens et al., 2016; Lai, 2016; Boser, 2013; Heydon & Lai, 2013; Hale, 2007; Wadensjo, 1998). Some scholars consider that the lack of access to official records of non-native police interviews has contributed to how interpreted-mediated police interviews are understudied (Boser, 2013; Hale, 2007; Mason, 2000). In light of such a limited exploration into police interpreting, this study aimed to explore in more detail the nature of these interactions.

About the Author

Further impetus for conducting this research came from the researcher's diverse professional background. The researcher has been involved in developing community engagement and scrutinising racial incidents on a voluntary basis at the HM Isle of White Prisons in Hampshire. She has also worked as a professional "Appropriate Adult" (a role that included safeguarding the rights of vulnerable people when they are detained) while covering Hampshire police stations area. In her current practicum at the County Jail in Illinois, the United States of America, she is involved with a jail pilot program, which aims to counsel inmates about violence and to control destructive behaviour. The
researcher is bilingual in Polish and English and bicultural from having resided in Great Britain for several years. The work experiences overall provided her with an opportunity to gain valuable insight into the complexity of the communicative demands of the criminal justice system. The primary role of any professional is to make sure that all individuals have a voice of their own and that the methods used to work with them are based on best practice, regardless of which language is used during those interactions.

Chapter Summary

This chapter introduced rationale for conducting an experiment that investigated police interviews with non-native English speakers using 80 participants. The research explored the effectiveness of two separate interviewing techniques on the free recall phase of the police interview and compared them with a control group (native English speakers). The next chapters will present the literature review for the topic area, findings from the experiment, and discussion with conclusions.
Chapter 2: Literature Review

This chapter aims to provide an introduction to the subject of the study. The research focuses on witnesses’ and victims’ investigative interviews concerning non-native speakers, and those using an interpreter. The section begins by introducing the human memory paradigm in connection with the recollection of information. The chapter then presents the police interviewing model adopted in England and Wales, devoting significant space to explaining the cognitive interview and its methodological foundations, followed by a more specific description of the free narrative account. Next, the discussion moves on to the CI and its possible application in bilingual settings where the presence of an interpreter is required. The chapter introduces the concept of interpreting, outlines the legal framework that supports access to interpreting services during criminal procedures, and concludes with a discussion on bilingualism in relation to non-native speakers in police interviews.

Memory

The purpose of this section it to describe what memory is, how it works, and how to obtain the maximum quality and quantity of information from a witness in interpreter mediated interviews.

Introduction

In the 1984 Kirk Bloodsworth was convicted of the rape and murder of a nine-year-old girl and sentenced to the gas chamber. His conviction was primarily based on testimony made by five eyewitnesses. After Bloodsworth had served nine years in prison, new DNA testing showed that he was innocent (Junkin, 2005). Bloodsworth was released. It seems that all five eyewitness accounts misidentified Kirk as guilty of a crime. How could all five observers identify the person wrongly? Is not seeing believing? This case is only one example that shows how fragile human memory for recognition is. A previously held assumption about memory is that it works like a video recorder. First, it records all
the events of a situation and then plays them back exactly how they were recorded when needed. However, research shows this assumption to be false. Far from being a static repository of data, memory is constantly changing. In fact, research of memory indicates that memories are altered every time one retrieves a fact, concept, or event (Bartlett, 1932/1995). The process of retrieval itself makes the “remembered” memory much more likely to be retrieved again, the phenomenon known as the retrieval practice effect (Pyc & Rawson, 2009). However, the same practice can cause individuals to forget other information related to the retrieved memory. This phenomenon is known as retrieval-induced forgetting (Anderson, Bjork & Bjork, 1994). As the accurate and complete testimony of a witness is critical and can determine the success of the investigation as a whole, researchers have developed questions and techniques to help law enforcement support interviewees with their recollections of events (Fisher & Geiselman, 1992; Geiselman & Fisher, 1985). Before these aids are discussed, the principles of memory will be explained.

**Fundamentals of Memory Processes**

Memory refers to information the brain collects, stores, and may retrieve for later use (Licht, Hull, & Ballantyne, 2016, p. 217). It can be defined and classified in many ways. It can be seen as a cognitive system that retains information (Perrin & Rousset, 2014) or as learning over time that has resulted in an immense body of knowledge about the world and its surroundings (Sternberg, 1999). From the criminal justice perspective, memory is the chain that connects specific criminal occurrences with the current police investigation. Memory is a form of trace evidence, which one cannot collect physically (Loftus, Doyle, & Dysart, 2013). A witness could not recall the: who, what, where, and when of a criminal incident without the use of memory. Scientific theories of memory suggest that it operates in three general stages: (i) Encoding, which occurs when information is first introduced to our remembering system; (ii) Storage, where the information is put away over a period of time; and (iii) Retrieval, which occurs when information is located and retrieved from storage (Melton, 1963). As memory is fragile, it can be compromised at each stage of remembering (Yarmey, 2003). Kahneman (1973) in his experiments carried out in a laboratory at the Hebrew University established that people have a limited attention capacity and are unable to process all of the stimuli
available at any given time. Hence, some of the information will not be encoded, as individuals attend to a part of the information but ignore another part of detail.

Further, memory is made up of a series of "storage containers" that can be broken down into three components (Atkinson & Shiffrin, 1968). The sensory container, in which all sensory experiences are encoded and stored for 0.25 to 0.5 seconds. The short-term (or working) container, which encodes mainly auditory data consisting of approximately 7 (+/- 2) items and runs from 0 to 18 seconds (though, chunking of information can lead to an increase in the short-term memory capacity). Lastly, the long-term store, which encrypts mostly semantic data (but can also be visual and auditory data) for an unlimited period. Witnesses appear to rely on long-term memory while giving information about a crime they have seen. According to Tulving's theory (1972, 1983, 1999), long-term memory is made up of three partially overlapping systems: semantic, episodic, and procedural, which at times can cause challenges while trying to recall details of an event.

Procedural memory (subconscious) allows us to perform skills such as riding a bike or driving a car and usually does not need to be accessed during a witness recall. Episodic memory, however, refers to the capacity to retain information about personal experiences that are tied to particular times and places, hence encompassing what one remembers' (Lovelace & Southall, 1983). A recollection of what occurred during a one-off burglary could be an example of episodic memory. The memory of an event can also be distorted. Misinterpretation may happen when similar repeated incidents merge into one, creating a general memory known as 'schemata,' a script of a typical occurrence. When one creates schemata distinguishing one incident from all other previous instances may become problematic (Friedrich & Rader, 1997). In one study of eyewitness accounts of a robbery, the researchers (Greenberg, Westcott, & Bailey, 1998) demonstrated that schemata were used to fill in gaps in memory of an event that was incomplete. The effect of schemata was heightened, especially for the more extended period of retention interval (5 minutes versus one week). Similarly, Odegard and Lampinen (2004) investigated the frequency of memory conjunction errors for real-life events in a diary study. They found that memory reconstruction leads to borrowing specific details from one event and incorporating them into one's memory for a related event. The last memory system described by Tulving, known as semantic memory, stores general world knowledge like facts, ideas, words, or problem-solving and therefore deals with what one knows.
Bartlett (1932; 1995) examined how the memory of a story is affected by previous knowledge, cultural background, and unfamiliarity of participants with a text. He told British participants a Native American legend called “The War of the Ghosts,” divided them into two groups and asked to reproduce the story after a short time (Bartlett, 1995). He then asked them to reproduce the story again after days, weeks, months, and years. Although the study had several limitations, for instance, the methodology was not rigorously measured, there was no control condition, and no significant difference in the performance of the two groups. However, the study offered a possible explanation as to why witness testimony is sometimes limited in accuracy and completeness. Bartlett found that remembering is not a passive but rather an active process where information is retrieved and changed to fit into existing schemas to create the meaning of the new facts. In the researcher's quasi-experiment (no independent variable was manipulated) participants changed the story as they recollected it – a process which is known as distortion. Bartlett found three patterns of distortion that took place during recalling of the legend; (i) assimilation – the details of the story were unconsciously changed to fit the norms of British culture; (ii) levelling – participants omitted information which for them seemed unimportant, and the story became shorter and shorter with each retelling; and iii) sharpening – individuals tended to change the order of the narrative, added extra details and emotions in order to make the story familiar with their culture. The participants overall remembered the central themes of the story but changed the unfamiliar features to match with their own cultural beliefs.

Lastly, there are two ways to access information from human memory that is relevant to criminal justice procedures: recall and recognition. Generally speaking, the recall of information happens during the interview when the interviewee tries to remember an event using words. As this study is about non-native witness narrative, the interviewees used recollection as a primary method of eliciting information. Loftus and Palmer (1974), in their work on eyewitness memory, showed how memory for an event could change through differently worded questions. In their study, participants watched a car accident and subsequently were asked to give a testimony about what happened. Individuals who were asked how fast the cars were going when they smashed into each other reported higher speed estimates than people who were probed using verbs like collided, bumped, contacted, or hit. This phenomenon has significant implications for eyewitness recollections and has shown how easily memory for an event can be contaminated.
Recognition is the acknowledgement of information seen before (or heard, smelt, felt). Although in theory, recognition is less difficult since the information is provided as a clue to remembering, for instance in a custodial setting during a police line-up, however as shown in Kirk Bloodsworth's case of wrongful identification, sometimes it can fail. What is essential to notice is that both types of memory retrieval function very differently and independently in the brain (Licht, Hull, & Ballantyne, 2016; Milne, 2007). Besides, the factors that influence recall do not necessarily affect recognition. For instance, the cognitive interview as a memory aid enhances recall but does not help with recognition accuracy (Milne, 2004). As this thesis investigated witness recollections of a stimulus event as a primary measure of quality and quantity of remembered information, the next section will describe what types of details people usually remember.

Memory for Specific Details

Eyewitnesses seem to remember more information regarding the actions of an event, than the characteristics of people taking part in it. Yuille and Cutshall (1986) in the first investigation of a real-life incident, interviewed 13 witnesses who had observed a gun-shooting occurrence on a spring afternoon in Vancouver, Canada. Although the study cannot be generalized due to a low number of participants and the uniqueness of the incident, it provides an exciting insight into the characteristics of witness testimony. The researchers found that more than half of the evidence gathered related to information about the actions of shooters, and only one forth regarded descriptions of people involved. The information about the actions of delinquent was also more accurate compared to other details relating to the characteristics of the shooters. These findings could be explained by phenomenon know as flashbulb memories.

As the eyewitnesses were emotionally involved and attached to the incident, they might have created flashbulb memories that are recollections for circumstances in which one learns of a shocking and consequential or emotionally arousing event (Brown & Kulik, 1977; Licht, Hull, & Ballantyne, 2016). The flashbulb memories might have shaped the eyewitnesses' recollections, making them distinctly robust, vivid, and rich in detail. Although, research suggests that one should be cautious of flashbulb memories as sometimes they include inaccuracies or lack of specific details (Talarico & Rubin, 2003). Additionally, the presence of the weapon might have affected the witnesses' memory even further. This phenomenon is known as channelised attention (Lacy & Stark, 2013). As the
weapon presents the most significant threat, people tend to focus on it and have little recollection of peripheral matters.

In another study concerning memory for violent real-life incidents, witnesses or bystanders of a bank robbery, researchers found relatively high memory recollection for action, weapon or clothing details compared to perpetrator features, such as eye colour or hair colour, or other aspects of the situation and surroundings (Christianson & Hubinette, 1993). Others scholars also have confirmed that witness descriptions of people tend to be more general rather than specific in regards to physical characteristics, while action details are usually what individuals remember the most (Brown, Lloyd-Jones, & Robinson, 2008; Migueles & Garcia-Bajos, 2007). When describing perpetrators, if they are of a different race from the witness, people may struggle to remember facial features and recognise them later as those features are less familiar to the ethnicity of the witness (Brigham, 2002).

Another factor that influences one memory is stress. According to research stress may have an impact on the amount of encoding information (Kebbell & Wagstaff, 1997). When people are stressed they have a more difficult time creating short-term memories and turning them into long-term memories. In other words, individuals have more difficult time to remember things when stressed. The stress also played an essential part in the studies mentioned above. One could argue that laboratory-based studies such as this conducted study are predominately stress-free, hence, may have limited application. However, this may not be the case. Laboratory experiments take place in a controlled environment and involve some kind of mental pressure. The controlled experiments enable the researchers to measure precisely the effects of variables, thus establishing cause and effect relationships (Dyer, 2006) and in turn allowing the researcher to make predictions about the future.

Another point regarding the type of details remembered is the memory for conversation, what was said - and context memory - who said what to whom. This phenomenon is relatively under-researched (Campos & Alonso-Quecuty, 2008; Neisser, 1981; Pezdek & Prull, 1993). Work on the topic tends to divide this kind of 'ear-witness' information into three categories; (i) conversation gist, or the idea of what was said; (ii) conversation verbatim, meaning precisely what was said; and (iii) conversation person, or who said what. From the investigative interview point of view, memory for conversation
is significant as it can provide critical evidence, which can aid the investigation (Campos & Alonso-Quecuty, 2008). In one analysis, the learned material (gist) was better retained over time than memories for the surface details or verbatim wording of that material (Brainerd & Reyna, 1993). Remembering essence may be attributed to integrating verbatim information with schema-based memory that consequently creates a base knowledge stored in the form of gist (Alba & Hasher 1983; Koriat, Goldsmith, & Pansky, 2000). The research guided by Campos and Alonso-Quecuty (2008) is one of the earliest studies conducted on remembering a conversation in a forensic context. The scholars found that witnesses tend to recall the gist of a criminal conversation rather than verbatim dialogue. They also indicated that the CI improved witness memory performance for the conversation event. Further studies seem to confirm this notion, showing that participants have poor verbatim memory (Miller, de Winstanley, & Carey, 1996; Pezdek & Prull, 1993). Some research on memory recollection also splits the information elicited by interviewees into the following four categories; (i) person detail; (ii) object detail; (iii) surrounding detail; and (iv) action detail (Prescott, Milne, & Clarke, 2011). During the investigative interview, the CI technique assists in remembering all of the types of evidence from those categories (Kohnken, Milne, Memon, & Bull; 1999).

There are other types of factors that affect eyewitness memory of to-be-remembered (TBR) events. Witnesses appear to remember particular details over other information (Koehnken, 1995). For instance, stereotypes of any kind, whether they are related to age, gender or culture (this will be described further in the bilingualism section below) may affect the immediate encoding of information at the time of the event and therefore influence the recollection itself (Brigham, Bennett, Meissner, & Mitchell, 2007). For example, if a person witnesses a break-in to a car by two individuals, one of whom is a Caucasian man and the other an African-American man, the individual may perceive according to stereotypes that mix-race individuals are more likely to commit an offence and consequently encode the situation as two African-American burglars. Because of the deficiencies associated with recollection such as misinformation effect (see Loftus, 1993), asking closed questions (see Lamb, Sternberg, Orbach, Esplin, Stewart, & Mitchell, 2003), or omission errors (Larsson & Lamb, 2009) the vast majority of research on memory has been used by practitioners in the United Kingdom to produce investigative interviewing practices aimed at maximising the quality and quaintly of elicited details. Those methods are discussed in the following section, together with associated legislation.
Police Interviewing of Witnesses and Victims

As the success of any investigation depends mostly on the accuracy and detail of the material obtained from witnesses (Achieving Best Evidence in Criminal Proceedings, 2011; Milne & Bull, 1999), only reliable information is useful in a criminal investigation. Unreliable information can have a negative impact on any criminal investigation (Milne & Bull, 1999). Law enforcement in the UK, therefore, has given special consideration to interviewing victims and witnesses of crime to gain quality information. Much legislation and guidance have also been set in place in order to safeguard legal proceedings with witnesses or victims of criminality including; (i) The Youth and Justice Criminal Evidence Act of 1999; (ii) the Criminal Justice Act of 2003 - the Code of Practice for Victims of Crime; (iii) the Coroners and Justice Act of 2009; and (iv) the Ministry of Justice Code for Practice for Victims of Crime (2015). During police investigations in the United Kingdom, witnesses and victims are interviewed following the PEACE model (CPTU, 1992). Grounded in scientific research, the PEACE approach reflects a move away from confrontational methods and towards information gathering activities.

The PEACE model is based on the psychological principles of communication, non-verbal behaviour, vulnerability, and memory theories (Shawyer & Milne, 2009; Walsh & Milne, 2008). The model assumes that an interviewee, with whom the interviewer has rapport, is more likely to cooperate and provide quality information that in turn can be used to help inform the investigative process (Risan, Binder, & Milne, 2016a). The organisation of the PEACE model is designed to cover the full structure of the investigative interview (pre-interview, during and after interview stages). The acronym PEACE is a prompt for (CPTU, 1992):

- Prepare and plan;
- Engage and explain;
- Account;
- Closure; and
- Evaluation.

Although the PEACE model was designed for any interviewee (Schollum, 2005), the first national evaluation conducted by Clarke and Milne (2001, 2011) found that in relation to witnesses and victims, it has not been implemented, as it should. The officers
were taking statements instead of using the model and interviewing witnesses and victims thoroughly. Consequently, a five-tiered approach to interview training was proposed by the authors of the report and then implemented into a National Curriculum (2003). Since the application, a number of studies have evaluated the use of each component of the five stages of the PEACE methodology, predominately at first focusing on suspect interviews (Clarke, Milne, & Bull, 2011; Walsh & Bull, 2010a, 2010b; Walsh & Milne, 2008) and later on witness interviews (Dando, Ormerod, Wilcock, & Milne, 2011; Dando, Wilcock, & Milne, 2008; Griffiths, Milne, & Cherryman, 2011; MacDonald, Snook, & Milne, 2017; Pescod, Wilcock, & Milne, 2013). It seemed that eliciting free recall and using active listening techniques were generally the most skilfully attempted or covered components of the PEACE. The findings from the study of newly recruited police officers and staged witnesses seem to confirm that the account component of the PEACE model is covered the most (Scott, Tudor-Owen, Pedretti, & Bull, 2015).

The central information-gathering section of the PEACE approach is the account stage. Here, two techniques for recalling information are used (i) Conversation Management (CM; Shepherd, 1991), which is used for uncooperative interviewees; and the cognitive interview (CI), the later version is the enhanced cognitive interview (ECI) (Fisher & Geiselman, 1992), which is used for complaint individuals. As this study used the CI technique to gather data, this method will be described in detail below.

**The Cognitive Interview**

In the 1980s two American psychologists, Geiselman and Fisher developed the CI, which is currently a well established technique used to enhance the recollection of cooperative eyewitness testimony (Geiselman & Fisher, 1985). The CI was built upon two theoretical assumptions of human memory. The different mental paths/cues can lead to the same memory and information that may not be accessible with one technique but may be reachable with another (Tulving, 1974). The encoding specificity principle of memory that states memory is improved when information available at encoding is also available at retrieval (Tulving & Thomson, 1973). In its original version, the CI included a set of four memory retrieval techniques given by the investigator to cooperative interviewees (Geiselman & Fisher, 1985):
- *Report Everything (RE)* – Interviewees are asked to report everything they remember without leaving anything out, even when the details seem unimportant;

- *Context Reinstatement (CR)* – Interviewees are asked to mentally re-instate circumstances of both environmental and personal characteristics of the witnessed situation;

- *Reverse Order (RO)* – Interviewees are asked to report an event in varied or reverse order; and

- *Change Perspective (CP)* – Interviewees are asked to view the event from someone else’s psychological perspective.

The first laboratory evaluation of the effectiveness of the CI found that the CI generated more correct information compared to the standard interview (Geiselman, Fisher, Firstenberg, Hutton, Sullivan, Avetissen, & Prosk, 1984; Geiselman, Fisher, MacKinnon, & Holland, 1985). However, it took longer to conduct. Upon evaluating real-life police interviews, problems were found (Fisher, Geiselman, & Amador, 1989). The majority of the officers started with an open-ended question, eliciting a free narrative account. However, the interviewees were interrupted after approximately 7.5 seconds on average when answering an initial open question. The officers also used an excessive amount of questions, which hindered the retrieval process and reduced the amount of evidence obtained (Clarke & Milne, 2011). As a result, Geiselman and Fisher extended the CI and developed the Enhanced Cognitive Interview (ECI) (Fisher & Geiselman, 1992). The ECI included social and communicative components that are essential for conducting good investigative interviews, including rapport building, witness-centred questioning, or transferring control of the interview to the interviewee. The ECI is composed of several phases that are outlined below (taken from Milne & Bull, 1999, p. 40; Milne, 2004):

**Phase 1:** Greet, personalise the interview, and establish rapport

**Phase 2:** Explain the aims of the interview
- Focus on retrieval and concentrate as much as possible
- Report everything
- Transfer control

**Phase 3:** Initiate a free report
- Reinstate the context
- Avoid interrupting
Phase 4: Questioning
≈ Report everything
≈ Use interviewee-compatible questioning
≈ State that it is OK to say ‘I don’t know’
≈ Activate and probe an image
≈ Use open and appropriate closed-ended questions
Phase 5: Varied and extensive retrieval
≈ Change the temporal questions
≈ Change perspectives
≈ Focus on all senses
Phase 6: Investigate important questions
Phase 7: Summary
Phase 8: Closure
Phase 9: Evaluation

Although both the CI and the ECI have been shown to have the potential to enhance the quality and quantity of recall in interviews with willing subjects (Gudjonsson, 1992; Kebbell, Milne, & Wagstaff, 1999; Koehnken, Milne, Memon, & Bull, 1999; Memon, Meissner, & Fraser, 2010) a few studies have also found that the cognitive interview is associated with a slight increase in the reporting of incorrect details (Kebbell et al., 1999; Köhnken et al., 1999; Wells, Memon, & Penrod, 2006). As "an interview is more of a marathon than a sprint" (Yeschke, 2003, p.22) various studies emphasise that the use of the CI has a practical implementation issue it is too time-consuming (Bull & Cherryman, 1995). The investigators are under pressure to get results, and their lack of making adequate time for the interviews may affect their quality. Despite recognized limitations, the CI, when correctly implemented, is seen as a superior technique for increasing the recall of correct information from witnesses and victims compared to other interview methods such as question-answer. As this research utilised the free narrative account in measuring non-native speakers memory recollections, the first phases of the ECI leading to the account stage will be described further below.
The Free Narrative Account

It has to be emphasised, that each phase of the ECI determines the success of the investigation as a whole. Phase one – *Greet, Personalise The Interview, And Establish Rapport* – begins with the initial point of contact. The circumstances of witnessing or being a victim of a crime can be somewhat nerve-racking (Risan, Binder, & Milne, 2016a). Psychological literature has established that witnesses to real-life stressful situations have high recall accuracy (Christianson & Hubinette, 1993; Yuille & Cutshall, 1986) but stress or anxiety decreases the quantity of information recalled (Milne & Bull, 1999). Therefore, the officers’ main task during the first stage of an investigative interview is to reduce any possible tension or nervousness felt by the interviewees at the beginning of questioning. Feeling at ease allows witnesses or victims to concentrate on retrieving information related to the event entirely. Here, the investigator needs to demonstrate an understanding of the situation (Milne, 2004; Risan et al., 2016a; Risan, Binder, & Milne, 2016b), communicate empathy (Rogers, 1942), and promote meaningful interaction (Bull, 1992; Risan et al., 2016b). This stage is also known as ‘establishing rapport,’ the most influential factor in ensuring the success of an interview (Ede & Shepherd, 2000; Milne & Bull, 1999; Walters, 2002; Walsh & Bull, 2012; Yeschke, 2003). Rapport building, which is similar to relationship building, is particularly crucial for witnesses and victims since they must give detailed descriptions of intimate, personal experiences to police officers who are complete strangers to them. The interviewees must be psychologically comfortable with the officers (who are dressed in official uniform) to elicit crime-related information (Dando, Geiselman, MacLeod, & Griffiths, 2016). To overcome this natural obstacle, the CI officers are told to invest the time at the beginning of the interview to develop a meaningful rapport with the witnesses or victims (Abbe & Brandon, 2013).

In the second phase – *Interview Aims* – officers explain the reason for the interview and emphasise the expectations of interviewees, consequently transferring control of the interview to witnesses or victims. As people typically fear the unknown, giving the outline of the procedures and reasoning for them has the potential to reduce anxiety, which then can significantly contribute to a successful interview (Milne, 2004). The interviewers also should emphasise the importance of concentrating on significant mental images of an event (Gudjonsson, 1992; Memon & Bull, 1999). Witnesses next describe what happened in their own words and at their own pace with no interruptions.
from the interviewer in the *report everything* stage. The interviewees are encouraged to recall everything they remember without editing, reporting even partial details or information which may seem unimportant. In everyday life, people are usually not used to describing things in detail. Hence, encouragement from the officers to focus attention on all aspects of the witnessed event is essential. The witnesses or victims may hold back some vital information about the case unknowingly. Milne (2007) and Fisher and colleagues (Fisher, McCauley, & Geiselman, 1992) pointed out that interviewees may assume some details do not have investigative value, are apparent, or think that the law enforcement already knows specific information about the investigation and therefore may opt not to report them. Besides, some people report only information, which they are confident about, but the confidence level is by no means related to the accuracy of an utterance (Kebbell & Wagstaff, 1997). In this phase, a measure of control of the interview is explicitly transferred to the interviewee, who then plays an active role by doing most of the talking (80/20 rule; Milne, 2004). The investigator may act as a memory facilitator by trying to get the interviewees to reinstate the environmental and personal context of the crime mentally. This can be done by asking the interviewees questions about their general activities and feelings on the day, asking them to close their eyes, or requesting them to create a sketch plan of the event (Milne & Bull, 1999).

The essence of the third phase –*Initiate A Free Report*– is to curb the tendency of the officer to interrupt the interviewee. Every disruption may break the person's train of thought and stop the flow of information, potentially preventing essential facts from emerging (Ord, Shaw, & Green, 2004, p. 23). Hence, the investigator does not interject but identifies evidential topics for future exploration via a range of techniques. Fisher and Geiselman (2010, p.322) summarised some of the adverse effects of officers' interrupting interviewees with a bombardment of short questions in native speakers investigative interviews:

- The interviewer does most of the talking in the form of asking questions, and the witness merely ‘helps out’ by answering the questions;
- The questions are particular, often in the form of true/false or forced choice (e.g., was the car black or white?);
- Witnesses are discouraged from providing information unrelated to the specific question;
The sequence of the interview is determined by the interviewer, often adhering to a pre-determined written checklist of questions;

- The interview opens with a set of formal questions (e.g., witness's name, contact information) to allow the interviewer to fill out his/her crime report;
- The interviewer frequently interrupts the witness to ask follow-up questions; and
- The interviewer often asks leading or suggestive questions to confirm his/her hypothesis about the crime. (p. 322)

Fisher and Geiselman (2010) further point out that this kind of questioning reduces the number of information witnesses or victims elicit and increase inaccurate responses, leading interviewees to: (i) withholding information; (ii) not providing any unsolicited information; (iii) providing abbreviated answers; and (iv) volunteering answers they are unsure of (p. 322). Most importantly, this kind of questioning disrupts the natural process of memory searching, making memory retrieval inefficient (Fisher & Geiselman, 2010). The findings of Milne and Bull (1999) further support the idea of the negative consequences of interrupting the free recall narrative, showing that:

After being interrupted several times, the interviewee will soon expect this to occur throughout the remainder of the interview. Accordingly, the interviewee will tailor his or her responses by shortening these to fit the time constraints apparently set by the interviewer. Shorter responses are typically less detailed. Moreover, following an interrupted response, the interviewee is less likely to make a concerted effort to retrieve in a detailed manner and will instead retrieve in a less focused way, thereby eliciting more superficial responses. (p. 3)

If the interruptions during the free narrative accounts with the native speakers disturb the natural process of eliciting information and condense witnesses and victim accounts. How then would they affect interviews with foreign speakers where an interpreter is present and free narrative must change into a turn taking affair? The free recall approach is recommended to use with compliant witnesses or victims of a crime regardless of whether or not English is their first or second language. This will be discussed next in the following section.
Bilingual Police Interviews Mediated by Interpreters

This section describes the use of the CI when the police officer and the interviewee speak different languages and need the assistance of an interpreter. For the purpose of the thesis, however, it is first necessary to define police interpreting.

Definition and Models of Interpreting

Interpreting is about communicating what is *said* in one language first pronounced – called the source language (SL), to another, so-called the target language (TL) (Mulayim, Lai, & Norma, 2015). Interpretation is a “fairly complex form of human information processing involving the reception, storage, transformation and transmission of verbal information” (Gerver, 1971, as cited in Pöchhacker, 2007, p. 16). It involves performing multiple cognitive tasks, at times simultaneously (Russell, 2005) – receiving incoming utterances and holding them in the short-term memory; and sometimes successively – reproducing output messages after comprehending the input (Lai, 2016, p.106). What makes interpretation even more complicated is that interpreting has to be done ‘instantly,’ that is, a linguist must make decisions about how to convey the meaning of a message in a very short amount of time - almost immediately (Tommola & Hyönä, 1990).

There are two main types of interpreting: (i) simultaneous interpreting; and (ii) consecutive interpreting (Pöchhacker, 2016). With the simultaneous model, an interpreter follows the speaker almost immediately and is about half a phrase behind the speaker (Edwards, 1995, p. 13). Seleskovitch (1978) developed the Interpretive Theory of Translation (IT) that defines simultaneous interpretation, as:

In simultaneous interpretation, the interpreter is isolated in a booth. He speaks at the same time as the speaker and therefore does not need to memorize or jot down what is said. Moreover, the processes of analysis-comprehension and reconstruction-expression are telescoped. The interpreter works on the message bit by bit, giving the portion he has understood while analysing and assimilating the next idea (p. 125).
The second type of interpretation, consecutive technique, allows more time for interpretation. In consecutive interpreting, the interpreter waits until the speaker completes a message and pauses. Then the interpreter transmits that information (Russell, 2002). Seleskovitch (1987) defines further consecutive inter-lingual interaction:

In consecutive interpretation, the interpreter does not start speaking until the original speaker has stopped. He, therefore, has time to analyse the message as a whole, which makes it easier for him to understand its meaning. The fact that he is there in the room, and that the speaker has stopped talking before he begins, means that he speaks to his listeners face to face and he actually becomes the speaker. (p. 123)

Consecutive interpretation tends to be used in investigative interviews at all stages of a criminal investigation (so-called police interpreting). Simultaneous methods are utilised at international conferences and are often called conference interpreting. Simultaneous interpreting can be also used in courtroom settings where no equipment is provided, and the interpreter has to render the interpretation in a lowered voice to a person seated next to interpreter (also known as ‘whisper interpreting’ from the French ‘chuchotage’; Mulayim, Lai, & Norma, 2015).

In addition, there are two types of consecutive interpretation. The short-consecutive (or semi-consecutive) interpreting occurs when the interpreter renders short utterances, usually segment by segment in turn. The long-consecutive interpretation occurs when the interpreter interprets considerable lengths of talk, usually taking notes to aid memory his/her memory (Gonzalez, Vasques, & Mikkelson, 2012). It should be pointed out that the distinction and usage between either short or long-consecutive interpreting it is not necessarily clear-cut (Pöchhacker, 2016). It depends on the speaker, who voluntary regulates the length of segments, or is a result of the interpreter’s initiative or prompt to stop the speaker’s discourse (Roy, 2000). Boser (2013) measured time duration of consecutive interpreting turn-taking (in short or long mode) in her case study of six eyewitnesses. The officers never produced a turn more than 10 seconds long, whereas the witnesses’ free recall sometimes embarks on a period of narration of 24 seconds. Besides, studies of turn-taking (Roy, 1996; Davidson, 2002) have shown that although in theory, the interpreter should take every second turn to talk (Speaker 1 – Interpreter – Speaker 2 – Interpreter – Speaker 1) the reality of triadic interactions is much more complicated. Aside
from regular turn-taking, segments of talk overlap with each other, and it is up to the interpreter to resolve this issue, usually by providing a visible feedback.

According to Dimitrova (1997), the interpreter's feedback is shown to have a coordinating function, encouraging the speaker to continue or showing that s/he is ready to take the next turn. Therefore, it seems that the control over the triadic interaction is in the hands of the interpreter. This fundamentally conflicts with the principles of the CI free narrative, where complete control over memory recollection should be in the hands of a witness or victim, not in the interpreter. How these circumstances affect the interviewee's memory is a crucial question this thesis addresses.

Interpreting as Cognitive Processes

A survey of the literature reveals that interpreters need wide-ranging cognitive skills. Some believe that interpreters need to have a good command of their working language to interpret accurately (Gonzalez, Vasquez, & Mikkelson, 2012; Jones, 1998; Tipton & Furmanek, 2016). For others, mastery of effective listening skills, defined as active listening "is quite different from other forms of listening," and must be "learned by the interpreter" (Jones, 1998, p. 14). Cultural knowledge (Mulayim et al., 2015) and subject knowledge (Fang & Cai, 2003; Kahane, 2000) are the main factors that affect the performance of interprets. However, virtually all experts on interpreting identified memory or recall, as the essential competency for professional linguists (Cai & Fang, 2003; Gile, 1995; Kahane, 2000; Mulayim et al., 2015). Seleskovitch, (1978) pointed out that “in interpretation, memory and understanding are inseparable; the one is a function of the other” (p. 34).

A skilful interpreter is expected to have a robust working memory (Mahmoodzadeh, 1992). Interprets work in the moment, remembering and rendering what the speaker has just said. Thus, what they mainly need is a good working memory. The role of long-term memory is to put the incoming information into context (Licht, Hull, & Ballantyne, 2016). Retaining information is particularly demanding in simultaneous interpreting because of the volume of information, the pace of storage, and the process of retrieval is forced on the interpreter almost concurrently (Gile, 1995). The essence of short-term memory in interpreting has been encompassed as a set of three efforts; (i) the Listening and Analysis Effort; (ii) the Production Effort; and (iii) the Short-term Memory
Effort, all combined by the Coordination Effort (Gile, 1995). The Effort Model indicates that the success of the interpretation is dictated not only by an increased capacity of the interpreter's memory but also by the effective management of the input and output information by the interpreter.

As the human brain has evolved to encode and store a very limited amount of information in working memory, a proficient interpreter needs to train their memory. All types of interpretation rely significantly on the interpreter's training and experience (Dillinger, 1994). An interpreter’s memory ability seem to progress over time. Dillinger (1994) has drawn attention to the fact that there are differences in the way novice and experienced interpreters perform the task of interpreting, and these differences are qualitative in nature. Experienced interpreters are superior at word recall and sentence processing tasks when compared to less experienced linguists (Köpke & Nespoulous, 2006; Signorelli, 2008; Tzou, 2009), fluent bilinguals (Tzou, 2009), and other non-interpreters (Signorelli, 2008) due to the effects of the practice. Work by Goodman-Delahunty et al. (Goodman-Delahunty, Hale, Dhami, & Martschuk, 2014) suggest that untrained interpreters make more errors and are less faithful in their interpretations than trained interpreters. The experience and skills of an interpreter play a critical role in interpreting, especially in simultaneous interpreting (Russell, 2002, 2005). Regardless of their practice and experience, however, interpreters are still humans and can make errors when editing responses given by interviewees (Nakane, 2009). Sometimes they use the incorrect equivalent of words; other times, they omit details reported by the interviewees (Mulayim et al., 2015). The criterion for determining professionalism in interpreting has been addressed by accreditation, which the following section explores.

National Accreditation

Some tragic incidences led to law enforcement recognising the importance of professional interpreting and accreditation. One incident, in particular, caught the public's attention when a court interpreter came under scrutiny in the case of Iqbal Begum, a victim of domestic violence who was convicted in 1981 for murdering her husband (Iqbal Begum (1991) 93 Cr.App.R. 96.). As she spoke very limited English, a Pakistani accountant was acting as her interpreter during the consultation with her advocate. At the trial, she did not have an interpreter present, and she pleaded guilty to a charge of ‘murder' without understanding the difference between murder and manslaughter. Consequently,
she was convicted to a life sentence, but after three years, her conviction was quashed. The *R v Iqbal Begum* Court of Appeal ruled that there is a need for defendants in court to be able to understand the proceedings:

> It is beyond the understanding of this court that it did not occur to someone that the reason for her [the defendant's] silence... was simply because she was not being spoken to in a language which she understood.’

Following this case, various arrangements were introduced to increase the accuracy of interpreting in court. The Runciman Royal Commission on Criminal Justice suggested in 1993 that only trained and qualified interpreters be used in court (House of Commons Justice Committee, 2013). In response, the National Register of Public Service Interpreters (NRPSI, 1994) was created, which required registrants to hold a Diploma in Public Service Interpreting in Law (or pass a qualifying exam) and have a practice of 400 hours of proven interpreting experience undertaken in the United Kingdom for full registration (10 hours for Interim Status). Later, in 1998 the Trials Issue Group recommended the exclusive use of NRPSI interpreters when selecting face to face interpretation for criminal investigations as well as for court proceedings (House of Commons Justice Committee, 2013). The majority of interpreters are hired through an outside agency (Capita Translation and Interpreting) and work under commercial pressure to provide their service (Oxburgh, Myklebust & Grant, 2015). The next section explores fundamental civil rights associated with accessing interpreters in criminal settings, specifically in the context of police interviews.

**Rights to Have an Interpreter in Legal Contexts**

Having an interpreter present during criminal investigations is essential. Fisher and Geiselman (2010, p. 326) go as far as asserting that forcing victims to describe events in their non-preferred language increases their frustration. This right to interpretation was introduced by the International Convention on Civil and Political Rights (The ICCPR, 1966) and included suspects. The law later was extended to include victims or witnesses of a crime. In England and Wales, the UN recommendations were regulated under the Police and Criminal Evidence Act of 1984, Section 13, Code C: Detention, Treatment and Questioning of Persons (Home Office, 2014):
Paragraph 13.2 states that a person must not be interviewed in the absence of a person capable of interpreting if:

- They have difficulty understanding English;
- The interviewer cannot speak the person’s own language (though, the current national guidance on the use of interpreters advises that bilingual officers should not conduct an interview because of the issues concerning the independence and qualification of the interviewing offices) (Berk-Seligson, 2017; National Agreement on Arrangements for the Use of Interpreters, 2007);
- The person wants an interpreter present.

Other directives have played a significant part in the safeguarding of fundamental human rights when interpretation is required. These include:

- The Human Rights Act of 1998 (Article 6);
- The Race and Relations Amendment Act of 2000;
- The Disability Discrimination Act of 1995/2005 (Part 3); and
- The 2010 European Convention on Human Rights (Article 5 and 6), which is incorporated into UK domestic laws.

National Guidelines on police use of interpreters were issued by the Association of Chief Police Officers and Interpreters Working Group and aimed to give practical advice and solutions to common problems that have been previously encountered in situations involving interpreters (National Agreement on Arrangements for the Use of Interpreters, 2007). The subsequent section forms an essential basis for the rationale of the thesis and examines police interviews in bilingual settings.

**Characteristics of Interpreter-Mediated Police Interviews**

Although the interpreter's role in a criminal investigation with foreign persons is indispensable, research has shown that interviewers and interviewees can have contradictory views on the use of interpreters. Some have negative connotations concerning an interpreter’s involvement in police cases (Hale & Gibbons, 1999). Having an interpreter present during police investigations can make the length of questioning
twice as long (Ewens, Vrij, Mann, Leal, Eunkyung, & Houston, 2017). Law enforcement often struggles with the length of time, seeing an interpreter "as a necessary evil that is tolerated rather than welcomed" (Hale & Gibbons, 1999, p. 207). Officers also consider the use of an interpreter as an inconvenience because the other person is not communicating in the same language as they are, thus requiring the support of a linguist (Wakefield, Kebbell, Moston, & Westera, 2015).

Further, investigators suggest that interpreters have a negative effect on rapport and the reporting of information by the interviewee (Driskell, Blickensderfer, & Salas, 2013; Russano, Narchet, Kleinman, & Meissner, 2014; Soufan, 2011). However, Ewens et al. (Ewens, Vrij, Leal, Mann, Jo, & Fisher, 2014) found no effect of an interpreter’s presence on rapport building in the context of an investigative interview, but they did find that when an interpreter was used, participants provided less information compared to those who were speaking in their native langue without the support of an interpreter. These findings were echoed by another study where native English participants who were interviewed in English provided more detail than participants who were either interviewed in their native tongue through an interpreter or in their second language (Ewens et al., 2017).

The assistance of an interpreter, however, is not an option, but the basis of justice in police interviewing (Engle, 2002). The use of an interpreter benefits both parties: the foreign language speaker as a means to access justice and the interviewing officer as a means to carry out his or her role. Russano et al. (2014) found that interpreters can have a positive effect on the investigation, as they can provide insight into the cultural aspect of the interviewee's environment. Additionally, experienced interviewers believe that when a language barrier is present, interpreters become critical members of the investigation team. From an interviewee's perspective, having someone in the room that shares his/her language and culture may feel reassuring (Ewens et al., 2017). When Ewens at al. (2017) asked interviewees about their experience with having an interpreter present during an interview, the participants typically found that the interpreter made it easier for them to remember what had happened during the meeting. Conversely, the authors also found that almost a third of the participants indicated that they would have provided more detail if they would have been given the opportunity to be interviewed in their own language without the interpreter.
A further aspect of interpreted facilitated interviews is the fact that the presence of an interpreter during police interviews changes the dynamic of that interview. From the perspective of a dyadic interaction (between two people), the setting of face-to-face interpreted-assisted questioning transforms into triadic communication (three people), which is significantly different in nature (Wadensjo, 1998). In triadic interactions, the interpreter is present during the verbal exchange, as illustrated in Figure 1 (adapted from Heydon & Lai, 2013, p. 87).

Figure 1.

*Triadic Interpreting Diagram*

The dotted lines on both sides of the triangle represent the ‘indirect' flow of verbal exchanges between people who do not share the same language. The message must be ‘routed' between two primary interlocutors (Heydon & Lai, 2013). The bottom of the triangle (the solid line at the base) shows the un-interrupted communication in monolingual interviews. As seen in Figure 1, questions, answers, and meanings are being cooperatively constructed by three different individuals in interpreter-mediated police interviews (Oxburgh et al., 2015, p. 305). The non-native speaker and police officer are responding to the interpreter's turns, not their own. The interpreter has to convey adequately not only the meaning of utterances, but both parties' linguistic reactions and style of speech to avoid misleading or hampering the investigation.

Bot’s study (2005) analysed the turn-taking patterns of interpreter-assisted medical interviews and coincided with earlier observations of triadic interpreting interactions mentioned above. The author captured the main characteristic of turn-by-turn management, highlighting that:
The interpreter's needs and interests concerning turn-taking are different from those of the primary speakers. For example, the interpreter benefits from shorter turns from the primary speakers regarding their interpreting performance, whereas this may not be the primary speakers' primary concern. (p.112)

Roy (2000) noted that access to talk-turns is a mixture of the interpreter's decisions as well as the primary speaker's unspoken agreement to accept those decisions. Interpreters seem to benefit from shorter turns because less information needs to be translated at a time, and the interpreters are less likely to become overloaded with information (Bot, 2005). As the interpreter can influence the length of recall information in turn taking, can they also influence how much information a witness elicits at one turn of talk? If yes, how interpreters’ decisions on intervals affect witness memory recollection, which should be free from disturbances and uninterrupted? Taking all this into consideration, the next section explains how interpreters could be utilised to satisfy the two different investigative requirements of the CI protocol (un-interrupted free account and communication facilitation).

The Cognitive Interview with Non-native speakers

As discussed in the previous section, the free narrative account is significant from the investigative point of view (see section 1.4 Rationale for Research for additional details). The utilisation of the CI with non-native speakers has not received much attention from scholars. One particular study investigated interpreting the free recall segment of investigative interviews (Boser, 2013). The research was based on the experimental data comprised of six recorded witness interviews about car theft. The eyewitnesses were native speakers of France and Germany. Three voluntary post-graduate students studying public interpreting acted as interpreters. Participants viewed silent CCTV footage of real-life car theft and after 24 hours were interviewed by a police officer in PRICE (mnemonic of a Scottish format of investigative interviewing). The interviewees were assisted by one of the interpreter's in the consecutive interpreting mode (average free recall lasted 3.36 minutes). Boser (2013) found that at the beginning of the interview in a briefing, the interviewees and interviewers were encouraged to keep their narration in short sentences. The push to keep short phrases and short turns of interpreting was aimed to avoid 'information overload' for the interpreter. Consequently, the study found that the
interpreter in mediated interviews requests segmentation of the interviewee's disclosure, which disrupts the flow of the free narrative (Boser, 2013).

Other research suggests that when interpreting interruptions are required in conversation (e.g., the interpreter disrupts the conversation to aid the interviewee), they do not lead to disruption of memory performance (Colin & Morris, 1996). This view is not supported by Wadensjo (1998). The author suggests that any segmentation of the free narrative and the coordination of turn-taking in interviews (as it occurs in police interpreting models) may trigger a premature conclusion about an interview, which causes the interviewee to volunteer less information. A study on how the interruption of activity can affect memory and the task carried out at that moment found that memory recovery following a disruption (a turn for interpreting, for instance) becomes more difficult (Edwards & Gronlund, 1998). Interruptions may make memory retrieval more challenging because it disrupts the interviewee's train of thought (Vrij, Hope & Fisher, 2014). When story-telling by interviewees during consecutive interpreting is disrupted by the interpreter rendering their speech, an interviewee may reorient the discourse towards what they consider to be a relevant topic, causing them to forget what they wanted to say or just move on to the next topic, losing valuable information. Thus, the research overall suggests that interruptions have negative consequences on the speaker's performance.

Presumably, if one would want to keep the original format of free recall in interpreted mediated interviews, the interpreter would have to either hold information in long-term memory before rendering it into the desired language or make notes about the recall. Using both methods can be challenging even for a highly trained interpreter. It could be hypothesised that this deficiency may create a higher number of interferences for the interpreter, which would unquestionably hinder the intended aim of the CI (Fowler, Vaughan, & Wheatcroft, 2016). Thus, research suggests two alternatives to consider in relation to police interview method; (i) using a shortened version of the CI (Davies, McMahon, & Greenwood, 2005); or (ii) employing the CM techniques in order to elicit information from witnesses or victims while using interpreters (Fowler et al., 2016). The effect of applying both of these techniques may lower the amount and accuracy of elicited information.

Another possibility to consider is to alter the interpreting technique that is employed in police interpreting (consecutive interpreting is currently used in the UK as the
standard method). This can be done by modifying current interpretation technique and using (i) the whispered simultaneous interpretation method known as Chuchotage (Colin & Morris, 1996, p. 48); or (ii) by applying the long consecutive technique (Hale, 2007). Chuchotage (French for ‘whispering’) is a form of interpreting where the linguist stands or sits alongside the target listener and whispers a simultaneous interpretation of what is being said. This technique is known to minimize interpreter interferences or avoid them altogether (Colin & Morris, 1996, p.48). The long consecutive interpreting method requires the interpreter to focus while a non-native speaks, sometimes for several minutes. The interpreter then renders the passages to the police officer with the support of notes. The free recall is delivered in segments throughout the interview only with a few breaks for the interpreter to render, which tends to minimise interpreter interventions (Fowler et al., 2016).

Nevertheless, using one or another technique has its share of shortcomings. Chuchotage requires simultaneous interpreting skills (the interpreter must listen, translate, and speak at the same time), which requires expertise (Gile, 1995). The officer has to listen to ambient noise and the voice of the speaker, which in conjunction can be distracting, and the whispered interpreting may prevent the interviewee from recalling information (Hale, 2004). The long consecutive interpreting relies significantly on note-taking. Therefore some paralinguistic elements (e.g., nonverbal communication, intonation, emotions) are lost (Gillies, 2005). In addition, the distance between the original speech and the interpreted version is too long for the officer to match non-verbal information with the verbal information.

The onsite-video equipment is also becoming a standard component to assist police officers, mainly while interviewing a vulnerable witness or victim. This is called remote interpreting (RI; Brown & Taylor, 2011). Research shows that remote interpreting is challenging and differs from onsite interpreting as it increases the number of additions and expansions (elements of interpreting that were not present in the original utterance; Schjoldager, 1996) in rendered messages (Brown & Taylor, 2012). A lower rapport was created between all parties taking part in the interpreting interaction compared to the level of rapport in onsite interpretation. The feeling of remoteness by the interpreters was also reported by interpreters using RI.
All the above-proposed approaches to accommodate the interpreter in police interviews without compromising a free narrative flow have some drawbacks that may interfere with an interviewee's memory processing. Therefore, the research in this thesis proposed an alternative method of interpreter-mediated interviews (sub-variant of simultaneous interpreting), which would maintain the original objective of the CI format without interruptions (this technique is discussed in detail in Chapter 3: Methodology). Another matter to be considered in police interviews with non-native speakers is their second language speaking ability and its effect on memory, encoding, and recalling of information.

**Language Fluency and Understating in Criminal Context**

Learning to speak and write in one’s native language proficiently is often challenging and takes time (Haynes, 1998). Attainment of a second language requires even more effort, commitment, and practice. Learning a new language is like asking one to go through a second childhood, starting with only a few words at the beginning. Individuals learning second languages use the same natural processes that are used to acquire their first language (Robin, 2014). The only difference is their age. They reach similar developmental stages to those working towards their first language acquisition, first by picking up chunks of the language without knowing precisely what each word means (Collier & Styles-Power, 1998). They also make the same grammatical errors that young children would make. The process of learning is not linear. It is more like a weave progression (Haynes, 1998). Acquisition occurs through continuous exposure over time, and the length of time necessary to become fluent in the new language may vary considerably.

Before acquiring sufficient vocabulary, individuals tend to communicate in their second language using *message reduction* strategies (vocabulary avoidance, message abandonment) or *alternation strategies* (meaning replacement; Chen, 2009). Foreign language users are also inclined to utilize familiar words rather than risking unfamiliar ones while they are still not very proficient in the language (Bialystok, 1990). Those who communicate in their non-native language offer less information as they are unable to express themselves as comfortably as they would in their first language (Huang, 2010). However, apart from understanding a second language, there are other benefits of learning foreign languages. Research suggests that people who speak two or more languages have
better overall cognitive abilities, memory and memorisation skills (including better working memory), and improved concentration and attention than people who speak only one language (Morales, Calvo, & Bialystok, 2013; Stavrakaki, Megari, Kosmidis, Apostolidou, & Takou, 2012).

How quickly individuals learn the language depends on many factors, including the level of formal education, family background, and length of time spent in the country (Krashen & Terrell, 1983). In theory, it takes most individuals up to eight to ten years to achieve a full comprehension of the second language. There is an assumption that a bilingual person can switch from a word in one language to its other-language equivalent (Chesterman, 1997). However, this is not as simple as it seems. Bilingualism requires extensive knowledge of two languages. Any misunderstanding could give rise to errors, which threaten the integrity of the justice process. “Bilingualism is relative rather than absolute”; that is, a person can speak a foreign language, and be bilingual or fluent in it to various degrees (Claus, 1997 p.7). For example, if an individual was raised in Poland by foreign-born parents (from England), learned both English and Polish, but never went to the United Kingdom; it may not be able to understand the underlying legal concepts within the English jurisdiction. Claus (1997) points out that in some cases, an individual with an excellent grasp in one language may only speak the second language at the level of a child.

Similarly, Mulayim at al. (2015, p.11) indicate that bilingual people tend to use their linguistic skills in one language at a time and mostly in different contexts. Thus, their skills in each language may progress differently. For instance, bilingual witnesses who are acquainted with legal or healthcare terms due to their work may not be as fluent in the same fields in their second language due to lack of exposure to those terms. Though, they may seem to communicate adequately well in all other aspects of life. This can have a profound effect during police questioning as someone may appear to have a second language linguistic capacity, but in reality, does not understand pertinent technical expressions.

Dixon and Travis (2007) inspected 262-recorded interviews (although with suspects of crimes as there is almost no published research with non-native witnesses) and found that an interpreter was present in only five cases. The researchers identified more instances were interpreter assistance would have been beneficial. In one example, the non-native speaker did not understand the term ‘free will,' while in another person could not
understand the word ‘promise’ (Dixon & Travis, 2007). Unfortunately, the stage of language acquisition non-native interviewees must attain to be interviewed in their second language during police questioning has not engaged much of the attention of researchers. However, what has caught the interest of academics is the fact that cross-linguistic differences influence non-native speakers' first recalls of events. This will be explored in the following section.

Cross-Linguistic Differences in Eyewitness Memories in Non-native Speakers

The studies of bilingualism in legal contexts show that cross-linguistic differences influence a second language speaker's recollection (Levinson, 1997; Pavlenko, 1999, 2000, 2003; Pederson, Danziger, Wilkins, Levinson, Kita, & Senft, 1998). First of all, a theory of linguistic relativity, the Sapir-Whorf hypothesis (Sapir, 1949; Whorf, 1956), proposes; “the particular language we speak influences the way we think about reality” (Lucy, 1997, p. 291). Secondly, the theory of interpretive frames (Tannen, 1980, 1982, 1993) suggest that bilinguals draw on a different language and culture-specific interpretive frames in recalling the same visual stimuli. Liebes and Katz (1990) tested this concept. The researchers examined how middle-class participants (Americans, Israelis, Arabs, Moroccans-Jews, and Russians) recalled the popular soap opera ‘Dallas.’ Results showed that eyewitness narratives varied from each other in structure. They also differed according to what individuals believed should be reported and how the stories were interpreted. Arabs and Moroccans offered a linear retelling of episodes and focused on the power of the character's positions within their family and society. Israeli and Americans favoured segmented narratives and described the intentions of individual characters, offering psychoanalytic explanations for various happenings. Russians, however, gave more abstract and generalised accounts, offering critical readings of particular storylines and the manipulative nature of soap operas. They concentrated on themes and messages rather than on individuals.

Similarly, Koven (1998, 2001) analysed bilingual autobiographic memory and personal narratives of Portuguese-French speakers. She asked participants to tell the same story in two different languages to two different individuals. The study suggested that verbal recall of the same event might vary with the language used to tell them. Correspondingly, Javier et al. (Javier, Barroso, & Munoz, 1993) examined autobiographical memory of Spanish-English bilinguals and found that verbal recall is
more vivid, detailed and elaborate in the language in which the experience took place. In another study, Jarvis (1994; cited in Pavlenko, 2003, p. 263) showed a silent segment of a video showing a human collision involving a woman and Charlie Chaplin to learners of English as a second language (Arab, Korean, Japanese, Chinese, Spanish and Portuguese).

Consequently, participants were asked to describe what they saw in English. The researcher found systematic differences in the choice of words referring to the collision. Korean speakers used the word *meet*, Spanish learners referred to the term *crash*, Arabic individuals preferred describing it as an *accident*, Chinese participants favoured the expression *bump*, and Portuguese preferred not to mention the collision at all (50% did not declare that there was a collision). In a subsequent study with the same principles, Jarvis (1998) used Finnish and Swedish learners of English. The Finnish speakers preferred to describe the collision as *hit* or *crash*, while the Swedish speakers used the verb *run on*. The results are particularly thought-provoking in light of the Loftus and Palmer (1974) study, described earlier in this chapter (see Fundamentals of Memory Processes section) where recalled verbs describing a vehicle collision were followed by subsequent descriptions of an incident which were proportionate to the strength of the verb applied. Additionally, this could have significant implications within criminal justice contexts where cross-linguistic influences may play a part in the way witnesses recall a crime during a police interview.

**Research Aims**

The central aim of this research was to investigate free recall narrative accounts of the CI component with non-native interviewees. Through an experimental study, the author sought to demonstrate how the presence of an interpreter during a free recollection of an event affects eliciting information – mainly, whether or not using two different interpretation methods would make a difference in the amount and quality of detail remembered by the foreign language speakers.
Research Questions

This lead to the following questions: Is the use of interpreters’ a help or a hindrance for memory recall in the open narrative condition? Secondly, how should linguists be utilised in the interview scenario to achieve maximum gains in quantity and quality of information, and finally, which method is superior? For the comparison component of the study, the research employed two separate methods of interpretation; (i) consecutive interpreting (the traditional method of police interpreting used in the UK); and (ii) a variation of simultaneous interpreting (conference interpreting).

Three major themes were of interest, and these became the overarching goals that guided this investigation. The three aims were as follows.

Aim 1. To investigate whether or not using different interpreting techniques in the police interview impacts upon (i) the quantity and quality of information collected from interviewees; (ii) the accuracy of the interpretation; and (iii) the speed of the interpretation.

Aim 2. To compare two different interpreting methods – the consecutive interpretation and the simultaneous interpretation – and consequently, to conclude which interpreting method (i) is the most efficient for free recall; and (ii) which method is the most effective regarding the accuracy of the interpreting.

Aim 3. To examine the interviews with non-native English speaking participants who are fluent or proficient in English and are interviewed in English (a foreign language to them). To compare non-native English speaker memory recall with native speakers and also with two interpreting groups, and answer the following question. Should the interviewee who speaks English at an adequate level English use an interpreter for free recall?

Research Hypotheses

Theories of interpretation methods suggest that consecutive interpreting is more natural and rendered messages are more transparent and accessible for the audience to
follow than simultaneous interpreting (Danks, Shreve, Fountain, & McBeath, 1997; Mulayim et al., 2015). However, the constant starts and stops of consecutive interpretation can hinder the memory retrieval process, and the amount of detail recollected in a person trying to remember information (Boser, 2013). There are no interruptions in the flow of speech and information being transferred using simultaneous interpretation, however. Interpreting can be exhausting work, requiring extreme concentration and expertise (Lai, 2016). The simultaneous interpreters must work promptly with no time to search for a word that fits perfectly into the target language. Thus, interpretation mistakes are more common in simultaneous interpreting.

Theories concerning the use of oral communication strategies among non-native speakers demonstrate that non-natives may decide to reduce their utterances to using only familiar words instead of taking a chance to employ unfamiliar ones (known as message reduction and alteration strategies; see Bialystok, 1990; Chen, 2009; Huang, 2010). Message reduction and alteration strategies could have an immense impact on police interviews with second language speakers where the non-natives are encouraged to recall as much detail as possible. As speaking in a foreign language is cognitively demanding (Evans et al., 2014), a foreign language interviewee may opt to give a shorter recall of an event in question, consequently recalling less detail. The non-native language speakers also must suppress the natural control mechanism that automatically encourages them to communicate in their first language when sharing details about a crime they witnessed (Wang, Xue, Chen, Xue, & Dong, 2007). Thus, there is a danger that interviewees speaking in a foreign language may provide less information than individuals using their primary language. This may give the interviewer an incomplete picture of what happened during the incident in question (Ullman, 2001).

From the theoretical justifications, the following hypotheses were formed:

**Hypothesis 1.** The free recall of the two groups (Native English control and the Polish speakers in the simultaneous group) in their native language, without interruption, would provide the highest amount of recall.
**Hypothesis 2.** The Polish participants giving a free recall in English (English as a second language control group) would provide less detail than native English speakers but more detail than individuals using a consecutive interpretation.

**Hypothesis 3.** The simultaneous interpretation would be less disruptive in the free recall phase and thus would produce a greater quantity of recall than consecutive interpretation.

**Hypothesis 4.** The simultaneous interpretation will be a less accurate form of interpreting than the consecutive method due to cognitive complexity.

**Chapter Summary**

This thesis presented findings for an experiment that investigated police interviews with non-native English speakers using 80 participants. The study explored the effectiveness of two separate interviewing techniques on the free recall phase of the police interview and compared them with two control groups (native English speakers and English as second language speakers). This section aimed to provide a context for the data analysis and discussion in the following chapter.
Chapter 3: Methodology

The following section will describe the methodological arrangements of the study. The research was conducted to evaluate whether or not the presence of an interpreter during a witness’s free narrative account would have a significant impact on the quality and quantity of recalled information.

Research Design

A between-subjects design was used within four groups.

- **Group 1** – native English speakers providing a full free recall in their native language (NE control group).
- **Group 2** – native Polish participants giving a free recall in English, their second language (ESL control group).
- **Group 3** – in the consecutive interpretation condition, Polish participants provided a free recall in Polish with the aid of an interpreter (the interpreter interpreted segment/s of speech at the time). The interpreter was present in the interview room. This is how the current model of police interpreting is used. In this method, the interpreter listens as the interviewee gives a segment of speech. Only when the interviewee pauses, the linguist interprets what a person said. The interpreter speaks in the first person while interpreting. The interviewee sits opposite the interviewing officer with the interpreter off to one side, effectively sitting between two parties, forming a triangle.
- **Group 4** – in the simultaneous interpreting condition, Polish participants provided an uninterrupted, free recall in Polish, their native language, with simultaneous interpreting. In this condition, like the consecutive condition, Polish participants had a limited English ability to communicate and therefore required an interpreter. The interpreter was situated in a separate room that was linked to the interview suite through real-time video equipment. The linguist interpreted into the interviewer's earphone what the interviewee was saying while he or she was saying...
it, almost like a voiceover. This technique allowed for an un-interrupted free narrative of the witness account.

Dependent Variables

The dependent variables concerned two areas: participants’ memory recall and interpreting accuracy. The interviewees’ memory recall was measured by the following variables (they all will be described in detail in the coding section): (i) number of correct items recalled; (ii) number of incorrect items recalled; (iii) number of confabulations; and (iv) percentage accuracy (proportion of correct recall as percentage of overall recall). These four dependent variables were measured across five detail types: (i) person (how the burglars looked, what they wore); (ii) action (what the offenders did while breaking in); (iii) surroundings (outside environment, description of the house they broke into); (iv) objects (what burglars carried and stole); and (v) conversation (here, a distinction was made between the exact verbal content, the gist of it, and what who said what). The memory recall and the detail types were measure during the free recall stage and prompted recall stage.

Interpreting accuracy was also examined. The consistency and the discrepancy of interpreting was evaluated by the following variables: (i) number of correct interpretations; (ii) number of inaccurate interpretations; (iii) number of omissions; (iv) number of new information–inclusions; and (v) number of new information-confabulations. These variables were measured across the two interpreting methods, consecutive interpreting, and simultaneous interpreting.

Research Participants

Participants

Polish and English participants took part in this study. The first group of contributors constituted native English speakers, who were purposely allocated to research's control group. The other three groups encompassed Polish participants. The rationale for choosing participants from the Polish community was based on 2011 Census data and the fact that they are the largest non-British ethnic group in the UK (Office for
National Statistics, 2013). To stimulate real-life investigative protocol, before the interview, Polish participants were asked which language they would prefer to communicate in and subsequently to be questioned. Stating the language preferences is required under the Police and Criminal Evidence Act (PACE) of 1984, Section 13, Code C: Detention, Treatment, and Questioning of Persons (Home Office, 2014). Participants who preferred to be interviewed in English (their second language) were asked to complete online or on paper, the Cambridge English Language Assessment (see Appendix 1) prior to the study.

Cambridge English exams are designed to assess how learners use English to communicate in real-life situations. Exams are aligned with the Common European Framework of Reference for Language (CEFR, the international standard for describing language ability) and are recognized by over 20,000 universities, employers, and governments around the world (Cambridge English Language Assessment, 2016). According to the test results (the scale consisted of eight categories) non-native speakers who were categorised as Cambridge English Advanced (those with proper grammar and able to speak about a full number of subjects) and Cambridge English Proficient, (those who can speak fluently with high accuracy) were allocated to the non-native speaker condition and interviewed without the aid of an interpreter. The participants that scored low on the test were randomly assigned to either to the consecutive interpreting group or the simultaneous interpreting group.

Sampling

In total, 89 participants from the Polish and English community volunteered their time for the study. The final sample consisted of 80 individuals (six interview recordings were inaudible, one participant had a speech impediment, one had a mild learning disability, and one did not want to be recorded). The final sample, 20 were native English speakers, and 60 were native Polish speakers. The native English group consisted of 9 males and 11 females whose ages ranged from 20 to 74 with a mean age of 44.5 ($SD = 14.98$). English as a second language group was comprised of 6 males and 14 females. Their ages ranged from 18 to 39, with a mean of 27.9 ($SD = 6.92$). The duration of time the participants had been living in England ranged from 3 to 14 years, with a mean time spent in the country of eight and a half years ($SD = 3.10$). The consecutive condition group had nine males and 11 females whose ages ranged from 18 to 56 with a mean of
The participants had lived in England for an average of four and a half years, \( (SD = 4.56) \) ranging from half a year to 18 years. The last interview condition, the simultaneous interpreting group, was comprised of 6 males and 14 females. Their ages ranged from 18 to 48, with a mean of 36.2 \( (SD = 8.42) \). The range of time they lived in England was between half a year to 13 years with a mean of 5.6 years \( (SD = 4.03) \).

A note should be mentioned regarding age and memory. In the native English group, one of the participants was 74 years of age. Older adults do not perform as well as young adults when recalling information (Nyberg, Backman, Ernoground, Olofsson, & Nilsson, 1997), but Prescott, Milne, Clarke (2011) found that young-old adults (60-74 years old) and young adults (19-54) reported significantly more correct details than the individuals from the old-old adult condition (75+ years old) in their study of older adult's memory for criminal conversation. Dando (2013) believes that the literature relating to older eyewitness performance is in its infancy as there are only a small number of published studies regarding the subject. In his study, he was able to increase memory retrieval in age-appropriate adults by encouraging more "effortful retrieval" and "reducing dual-task load" (p. 2). As those over the age of 65 represent a growing population in the UK, and as the CI can be utilised with older populations, the researcher included this participant in the analysis with caution.

**Research Materials**

**Interviewer**

The researcher served as the sole interviewer for this study. She conducted all 89 interviews. Before conducting this experiment, the researcher received two days of training in using the cognitive interview in addition to a one-day refresher course. All interviews were conducted identically using a strict interview protocol (for full procedure Schedule, see Appendix 2; and for Investigative Interview Protocol Sheet, Appendix 3).

**Stimulus**

As a research stimulus, a short video of a staged burglary was made especially for this study. The video included dialogue for narrative exploration purposes and lasted 2
minutes and 45 seconds. To increase ecological validity, the stimulus depicted a crime being committed. As second language users are vulnerable witnesses (Home Office & Department of Health, 2002), it was appropriate to use a non-violent crime to avoid causing participants stress.

The film showed three young males in their early 20’s walking along a street looking at cars and chatting about the vehicles they used to steal. Their conversation went back and forth between English and Polish. Youngsters approached a residential building, drilled through the locks, and entered the house. They split up and searched the property, began with the kitchen area and found a phone, a black and orange bag with tools, and some drinks in the fridge. Young men also found keys, which they took and went downstairs to the garage area. In the garage, they found a black 4x4 car. Youths got into the car using the keys they found earlier and drove off. While they were driving, there was a discussion about where they should go, and in the background, there was a Polish band playing music. The stimulus is available online at http://youtu.be/ZnyxX3uZ5N8.

Language Assessment

To assess the English language proficiency of the Polish witnesses speaking without the interpreter, the Cambridge English Language Assessment test was used (available online www.cambridgeenglish.org/test-your-english/ or Appendix 1). The test had no time restraints and was administered before conducting the study. The test assesses English proficiency and contains 25 multiple-choice questions.

Interpreters

To facilitate a free recall of the monolingual Polish participants, this study used two Polish–English language interpreters, both females. The interpreters participated voluntarily, but in return were allowed to attend selected lectures at the University of Portsmouth (in investigative interviewing) after the completion of the study. The linguists had previous professional experience in police interpreting (Interpreter Number 1 had eight years of experience; Interpreter Number 2 had 12 years of experience). Both were affiliated with the National Register of Public Service Interpreters (6 years for Interpreter Number 1 and four years for Interpreter Number 2), and both were working as independent police interpreters. The interpreters did not know each other but were still
instructed not to confer with anyone about the study during its duration. To avoid contamination, the interpreters never saw the stimulus video. The linguists were also blind to the hypothesis of the study to avoid bias.

Each Polish participant speaking through an interpreter met the interpreter before starting the interview. The interpreter’s role was explained to the contributors of the experiment by the linguists themselves, creating the foundation for building rapport. In addition, participants in the simultaneous interpreting condition were aware that an interpreter was present in the other room in case they needed face-to-face assistance. Interpreters were also able to signify if they need a break or if the interviewee is talking too fast, but none of the interpreters and interviewees utilised this option.

When the interpreter was introduced in the consecutive condition, the linguist was seated on the right side, effectively forming a triangle between the interviewee and the researcher. In the simultaneous interpreting condition, the interpreter was not present in the room with the interviewee and interviewer but was placed in the monitoring room. She could see and hear the interviewer and Polish witness in real time on a 26-inch colour television.

**Procedure**

**Recruitment and Research Groups**

The participants were recruited via advertising posters in some Polish establishments in England (Southampton and Portsmouth) such as Polish accounting offices and Polish service bureaus, as well as internet announcements like Facebook and through word-of-mouth. This strategy aimed to extend the demographic age range and provide a more representative sample of the Polish community. If individuals were interested in participating, they were emailed or given the recruitment letter (see Appendix 4) and a participant information sheet (see Appendix 5). The information sheet was designed to help contributors understand the significance of the research and what their participation would involve, allowing them to make an informed decision about whether to participate or not. If individuals decided to participate, they were given a consent form to
sign (Appendix 6). Depending on language needs, the participants were contacted directly by the researcher in either English or Polish. They were then given all the necessary documents according to their language preference.

All willing participants were first divided into two groups: English natives and Polish natives. The native English speakers were purposely allocated to the control group, and the Polish nationals were further divided into two groups based on the language preference in which they wanted to be interviewed. Polish participants who preferred to be questioned in English were asked to complete online or on paper a multiple basic choice English language test with no time restraints before conducting the study. Participants who reached the Cambridge English Advanced or Proficient levels were assigned to the English as a second language condition. These participants were to be interviewed later in English without the assistance of an interpreter. The remaining participants were randomly assigned to one of the two interpreting conditions. They recalled the incident in Polish using the aid of either consecutive interpreting or simultaneous interpreting.

**Research Setup**

The experimental part of the research took place during the summer of 2015. All interviews were conducted in the same location at the University of Portsmouth in a suite designed explicitly for investigative interviews. The suite was equipped with audio and video recording technology that provided remote live-streamed viewing of the interview room. The life-streaming allowed the video to be seen in the next room, which occupied an interpreter using conference interpreting. Both the interview room and the interpreter’s room were kept quiet to allow the participants and interpreters to concentrate. The interviewer consistently sat in the same location across from the interviewee.

As many of the Polish participants lived approximately 25 to 30 miles away from where the study was taking place, the researcher organised a complimentary travel service to and from the study. Upon arrival, a researcher greeted participants. They were then briefed about participating in the study and given a full description of their involvement. All participants were asked to sign a consent form for their participation if they had not done so prior to their arrival. If everything was clear to all parties and all questions and concerns were answered, they were shown the video of the staged burglary.
**Interview Procedure**

Each participant individually watched a video on 26-inch colour television, positioned two meters away from where they were seated. The stimulus showed three young males breaking into a house, searching for valuables, and leaving with a stolen vehicle. The house in the movie was staged to have Polish features, such as the Polish coat of arms flag, Polish groceries, and Polish magazines. Polish music played in the car while the males were escaping and the males were communicating in both Polish and English. After viewing the video, there was a time delay of 5 minutes. In an ideal situation, the researchers would aim to have a more extended distracter period. From an organisational perspective, however, this was not possible as the interpreters were not available to commit to more extended time. The delay time was used to build up a rapport with the interviewee using principles of positivity (The researcher came across as friendly and approachable as possible). Shared attention (the interviewer paid attention to the interviewee and what they said) and coordination was used in these principles (The interviewer mimicked the participant's body language) (Houston, Russano & Ricks, 2017; Tickle-Degnen & Rosenthal, 1990).

After the time delay, the participants were taken to a separate location (the interview room) and the interviews were conducted in a room separate from the viewing area, to eliminate the possibility of spontaneous context reinstatement occurring (as it is easier to recall information when the environmental context is the same at encoding and retrieval; Hanczakowski, Zawadzka & Coote, 2014). In the two conditions assisted by an interpreter, participants were introduced to the linguist and were explained the role of the interpreter. Interpreters were also instructed to interpret precisely everything that was said by each person as opposed to summarising. They were also instructed to remain faithful to each participant’s version of the events, trying not to allow their prior knowledge of the event to influence the interpretation since only two linguists were assisting the study (this was accounted for in the statistical analysis – see later). This part of the study was also used as a rapport-building session between the non-native speaker and the interpreter. While the researcher was setting up the recording equipment in the other room, the interpreter was left alone with the interviewee, during which time the interpreter initiated small talk. The interview started when the interviewee returned to the room. Participants were instructed to report everything they witnessed from the video according to their
assigned condition group, as mentioned above (Investigative Interview Protocol Sheet, Appendix 3). The participants were encouraged to describe everything that they could remember without leaving anything out, even when the information seemed unimportant. At this point, in simultaneous interpreting condition, the interpreter left the room to continue interpreting from the other area.

The study used the CI free recall technique to gather data. All investigative interviews for the study were conducted in the same manner (see Appendix 2 and Appendix 3) and differed merely according to which of the four conditions participants were assigned. In the first group, native English speakers provided a full free recall in their native language (control group; 20 interviews). In the second group, native Polish participants gave an un-interrupted free recall in Polish (their native language), with an interpreter present in the other room using simultaneous interpreting (simultaneous interpreting condition; 20 interviews). In the third group, native Polish participants elicited a free recall in English, their second language (English as a second language (ESL) control; 20 interviews). In the last group, native Polish participants provided an interrupted free recall in Polish with an interpreter present in the same room using consecutive interpretation (consecutive interpretation condition; 20 interviews).

All interviewees were asked to report everything they witnessed in English or Polish with or without the aid of an interpreter. Each group was given the following instructions, which the researcher communicated orally in English or Polish:

Please tell me everything that happened in this video as best as you can remember. I would like you to tell me as much detail about the video as possible. It is important that you do not leave anything out, whether you think it is significant or not. Remember, I have not seen the video, so you have all the information. You may begin whenever you are ready.

The free recall narrative was then followed by two open-ended prompts and one closed question: (i) “Tell me everything about the burglars;” (ii) “Tell me more about the house;” (iii) “Is there anything else you think I should know?”
At the end of the interview, the participants were thoroughly debriefed, and given a general idea of the purpose and intent of the investigation as well as the participants' part in the research. As there was a possibility of current and future subjects knowing each other, all participants were instructed not to discuss any details of the study with other individuals until the data gathering part of the study was finished. The request of nondisclosure was used to avoid any contamination of the results. All investigative interviews were audio and visually recorded (apart from one, which was only audio-recorded as a Polish participant did not agree to be videotaped) and were subsequently transcribed.

**Coding and Scoring of the Interviews**

All the interviews were first transcribed according to their original recall language (40 interviews in English and 40 interviews in Polish). Then, the original transcripts of non-native speakers who spoke through an interpreter (40 participants) were translated by the researcher into English for checking the accuracy of the interpreting. As it is recommended to adopt a meaning-based interpreting strategy in a police interview setting, (in other words, a more concept-by-concept interpretation instead of word-for-word approach; Gonzalez, Vasquez, & Mikkelson, 2012), all transcripts were translated using this model. Mikkelson’s (1999) common sense and good judgment in determining how to translate were applied. In situations where there was an uncertainty of meaning, the researcher consulted a professional interpreter who had not been connected to the study and was blind to the methodological hypothesis. The interpretation consistency-coding was also performed (see Appendix 7 for coding template). The number of details initially recalled by the interviewee was compared with the number of details interpreted by the interpreter.

**Interpreting Accuracy**

This analysis involved interpreting accuracy based on the data from interpreted interviews (what the interpreter rendered). The number of details recalled initially by the interviewee was compared with the number of details interpreted by the interpreter. Every item of interpreted information was classified according to five categories:
- **Correct interpretation** – when the original speech and interpretation were the same, e.g., original utterance: "They broke into the flat by drilling the lock;" interpreted utterance: “They broke into the flat by drilling the lock.”

- **Incorrect interpretation** – where the original utterance differed from the interpretation, e.g., original utterance: “On the wall, there was American *flag* hanging;” interpreted utterance: “On the wall, there was American *law* hanging.”

- **Omission** – missing detail of recall (an interviewee recalled detail, but the interpreter did not interpret it), e.g., original utterance: “A person in a white top opened the door’s lock with the drill;” interpreted utterance: “A person in white top opened the door with the drill.”

- **New information inclusion** – new detail added to interpretation by the interpreter, the witness did not recall it, though the detail was in the stimulus, e.g., original utterance: “I think the accommodation belongs to Polish person because there was a *flag* and a Polish poster;” interpreted utterance: “I think the accommodation belongs to Polish person because there was a *Polish flag* and a Polish poster.”

- **New information confabulation** – interpreter added detail while interpreting and the detail was not in the stimulus and was not mentioned by the interviewee, e.g., original utterance: "So, they saw a *car*;” interpreted utterance: “So, they saw a *white car*.”

Overall percentage accuracy of interpreting was calculated.

### Coding of the Witnesses Accounts

The data was coded directly from the transcripts of the translated English interviews (what the witness said in their native language). Interviews were coded using a scoring template that mirrored the model used by Milne and Bull (2002) (see Appendix 7). The following variables measured the interviewees' memory recall: person (e.g., what the perpetrators looked like, what they wore); action (e.g., what the perpetrators did); surroundings (e.g., how the inside of the house looked and how the area in which the perpetrators were walking appeared); and an object (e.g., what the perpetrators carried and what they took from the house). Besides, to enable future detailed analysis, a fifth category for criminal conversation was introduced, much like Campos and Alonso-Quecuty’s classification (2008). The category for conversation was sub-divided into a person (e.g., who said what); conversation verbatim (e.g., what the perpetrators said precisely); and
conversation gist (e.g., what the perpetrator said in a general sense). An extensive list containing all the available details was created with the appropriate scores next to each specific detail (Appendix 7). Every item recalled was coded either as: correct (the specified detail was in the stimulus); incorrect (e.g., when interviewee said it was a red jumper, but it was, in fact, a black jumper); or confabulation (an action or detail which did not occur in the stimulus). Incorrect details and confabulations were coded separately because these two errors have different implications in a forensic investigation (Milne et al. 1999). Items of details recalled were only scored once, so correct items reported twice were disregarded.

Inter-rater reliability for all components of overall accuracy was computed. The second rater (a mature nursing student who had previous experience in conducting and coding psychological research) coded a random sample of 15 transcripts (12%). Inter-rater reliability between the first rater (the researcher) and the second rater was excellent for total detail ([ICC] = .95), correct detail ([ICC] = .90), incorrect details ([ICC] = .94), confabulated detail ([ICC] = .97), conversation person detail ([ICC] = .98), conversation gist detail ([ICC] = .97), and conversation verbatim ([ICC] = .99).

Ethical Considerations

All participation in the study was entirely voluntary. Participants were free to decline to participate for any reason. They were free to withdraw from the study at any time before the interview material had been analysed without giving a reason and without prejudice. If at any time during or after taking part in the experiment, they had any questions or concerns, they were able to contact the researcher using the contact information on the participant information sheet. The researcher considered the welfare of the participants who participated in the study as the main priority. The experiment did not place research participants at the physical, psychological, social, and reputational risk. The risk of harm to anyone who participated in this research was minimal; that is, the probability of harm was not higher than what was ordinarily present in daily life. The video did not contain violent or obscene scenes. Although it was not anticipated that this research would gather data that could compromise the standing of any individual, interpreter or the reputation of interpreting services, it was an opportunity for scrutiny of
the interpreting profession. Hence, the results from this study were written up in an anonymised format. It is not possible to identify anyone from the reports in this study.

Participants had a right to privacy, and all information identifying single subjects remained anonymous and confidential. All information gathered during the research was kept strictly confidential. All materials were stored in a locked cabinet in the researcher’s home and were made available only to members of the project team. All free narrative, recordings, transcripts, and researcher's notes were coded with numbers, and only the primary researcher had access to the names of the participants. Throughout the study, only their assigned number referred to participants. The research was not conducted in the researcher's place of work or at an organization where some other involvement extending beyond the genuine interests of the research existed. Therefore, there was no potential conflict of interests or duties.

This research used minor deception or omission, such as not telling participants the full nature of the study, the experiment's aims, or the hypothesis of the experiment. Deception regarding the primary purpose of the experiment is often used to avoid the so-called Hawthorne effect, which is the tendency of research participants to behave following what they think the researcher's expectations are (Gillespie, 1991). Thus, social psychologists use deception to avoid this kind of effect. In this experimental situation, deception is methodologically necessary in order to obtain reliable results. This deceptive method does not cause any harm and any significant violation of participants’ autonomy. After completing the interview, participants were thoroughly debriefed and were given a general idea of the purpose and intent of the investigation as well as the participants’ part in the research. Deception regarding the aims of the study was also explained to them.

Chapter Summary

This chapter explained the research setup, encompassing the instrument used, and the study participants. First, the between-subject experimental design was described. This was followed by a description of the participants and the materials used in addition to an outline of the interpreting conditions. The most extensive part of this section was devoted to an overview of the procedures used. This chapter concluded with an explanation of coding and scoring procedures.
Chapter 4: Results

The primary purpose of this experiment was to investigate the effect of the interpreter’s presence on the witnesses’ or victims’ free narrative accounts. This chapter is divided into two distinct areas; (i) memorial recall; and (ii) interpreting accuracy.

Overall Memory Performance

The first analysis of the participants’ overall memorial performance was coded directly from transcripts of interviewees’ speech (not from interpretations rendered by an interpreter, which would be analysed in the succeeding sections). There were four different conditions; (i) native English speakers (NE control) group, Polish speakers in the simultaneous interpreting group, English as a second language speakers (ESL control), and Polish natives in the consecutive interpreting group. The participants’ memorial recall served as the dependent variable. The means and standard deviations of overall memory recalls (total number of correct details, incorrect details, confabulated items, and accuracy rate) for each of the four groups are presented in Table 1.

Table 1
Overall Memory Performance Measures and Interview Duration for the Four Interpreting Conditions (Witnesses Direct Recall)

<table>
<thead>
<tr>
<th></th>
<th>English Native Speakers - Free Recall in Native Language - ENGLISH</th>
<th>Simultaneous Interpreting - Free Recall in Native Language - POLISH</th>
<th>English As A Second Language - Polish Recalling in ENGLISH</th>
<th>Consecutive Interpreting - Free Recall in Native Language - POLISH</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Total Correct</td>
<td>164.50*</td>
<td>52.44</td>
<td>104.85*</td>
<td>31.39</td>
</tr>
<tr>
<td>Total Incorrect</td>
<td>3.45</td>
<td>1.70</td>
<td>2.90</td>
<td>1.97</td>
</tr>
<tr>
<td>Total Confab.</td>
<td>2.25*</td>
<td>2.55</td>
<td>1.00</td>
<td>1.92</td>
</tr>
<tr>
<td>Witnesses Accuracy %</td>
<td>96.65</td>
<td>0.017</td>
<td>96.41</td>
<td>0.031</td>
</tr>
<tr>
<td>Interview Length (sec.)</td>
<td>300.60</td>
<td>123.93</td>
<td>254.65</td>
<td>67.54</td>
</tr>
</tbody>
</table>

Note * $p < .001$
Sample Characteristics

A Shapiro-Wilk’s test (p>.05) (Shapiro & Wilk, 1965) and a visual inspection of their histograms, normal Q-Q plots, and box plots showed that witnesses’ memory recollections for the correct details were not normally distributed (positively skewed) for the two categories of the interpreting groups. The other two groups meet the assumption of normality. The data for the two groups of participants recalling information in their first language did not differ significantly from the norm, with a skewness of .243 (SE = .512) and a kurtosis of 1.215 (SE = .992) for the Native English speakers, and a skewness of .506 (SE = .512) and a kurtosis of .097 (SE = .992) for the Polish speakers in the simultaneous interpreting group (Cramer, 1998; Cramer & Howitt, 2004). However, the data for the other two groups were skewed and kurtotic, with a skewness of 1.735 (SE = .512) and a kurtosis 3.197 (SE = .992) for the English as a second language speakers group, and a skewness of 1.704 (SE = .512) and a kurtosis of 5.168 (SE = .992) for the consecutive interpreting group. The Shapiro-Wilks test further confirmed that the assumption of normality had been violated for this latest group sample. The p-value for the two treatment groups, \( p = .002 \) for the ESL group and \( p = .007 \) for the consecutive interpreting group was less than .05. Thus, the null hypothesis that the data were normally distributed was rejected. It was concluded that at least two of the group means were significantly different from each other. The assumption of normality has only been met for the two other groups, \( p = .186 \) for the Native English speakers and \( p = .487 \) for the simultaneous interpreting group.

Since a normality test failed for the two groups, it was investigated why the data was not normal. The examination of the box plots showed that the data had multiple outliers. To access how much the presence of outliers influenced the results of the study using a parametric method, a one-way analysis of variance (ANOVA) was computed twice on the entire data. Simulation studies, using a variety of non-normal distributions, have shown that ANOVA is generally robust to violations of the normality assumption as long as group sizes are equal and the sample sizes are large enough (at least 15 for each group) (Glass, Peckham, & Sanders, 1972; Harwell, Rubinstein, Hayes, & Olds, 1992; Lix, Keselman, & Keselman, 1996). The first ANOVA was computed by using the original (raw) data. Subsequently, the outliers were removed (replaced by the mean value) and the second ANOVA was calculated. The difference between the effect sizes \( d_{\text{raw}} = .302 \) vs.
without outliers = .208 was less than 20%, which showed that the violation of the normal distribution only had a small effect on the interpretation of the findings. As the outliers did not influence the results, the analysis of the full data using parametric methods proved to be an option. To further investigate the influence of the violations of assumptions of normality on the results, the data were transformed using Logarithmic (Log10) transformation (Howell, 2007). The new transformed variables had a normal distribution. Again, a one-way ANOVA was computed twice. The first calculation was computed on the unconverted (original) means, and the second calculation was processed on the converted (transformed) data. The effect sizes of $d_{\text{raw}} = .292$ vs. $d_{\text{transformed}} = 0.301$ was compared with the difference being less than 20%. Hence, the violation of the normal distribution only had a small effect on the analysis.

Since some of the samples came from skewed population distributions, the nonparametric test to assess the homogeneity of variance has more statistical power. Therefore, a robust nonparametric Levine's test that is less likely to commit Type I and Types II errors were computed to verify the equality of variance of the four groups ($p > .05$) (Nordstokke & Zumbo, 2010; Nordstokke, Zumbo, Cairns & Sakiolfske, 2011). A nonparametric Levene's $F$ test, $F(3, 76) = 1.24$, $p = .302$ conformed the assumption of homogeneity of variance for the overall sample at the .05 alpha level. Taking into consideration the above analyses it was decided that a one-way ANOVA on transformed data would be used to analyse the results for the correct details recalled during witnesses interviews, but the original data findings would be reported.

**Correct Details**

A one-way between-subjects ANOVA on transformed data was conducted to examine whether the presence of an interpreter during the interview would affect witness memory for recalling the correct details of an event. It was found that there was a statistically significant difference across conditions for the number of correct items recalled, $F(3, 79) = 10.942$, $p = .001$. The $\omega^2 = .302$ indicated that approximately 30% of the variation in the number of correct details recalled was attributed to differences across the four groups of interpreting. The native English speakers reported significantly more correct information ($M = 164.50$, $SD = 52.44$) compared to all three groups that were comprised of Polish natives. No significant effects were found between the rest of the groups. The Polish participants recalling details in English, their second language,
provided the most correct information \((M = 110.65, SD = 44.02)\) compared to the Polish natives speaking through an interpreter. The participants in the simultaneous interpreting group elicited more details \((M = 104.85, SD = 31.39)\) than participants in the consecutive interpreting condition \((M = 95.50, SD = 35.54)\).

**Incorrect Details**

The test for normality, which examined standardized skewness and the Shapiro-Wilks test, indicated the data for incorrect details were statistically normal. Additionally, homogeneity of variance was not significant, Levene’s \(F(3, 76) = 1.36, p = .263\), indicating that the assumption underlying the application of ANOVA was met.

No significant differences were found across the four conditions for the overall number of incorrect items recalled, \(F(3, 76) = 1.663, p = .182\). Although the consecutive interpreting group elicited the least amount of correct details overall, they also reported the most incorrect information \((M = 4.35, SD = 3.41)\) compared to all other groups. The Native English speakers group elicited the largest amount of correct details and they produced more incorrect information \((M = 3.45, SD = 1.70)\) compared to both the simultaneous interpreting group \((M = 2.90, SD = 1.97)\) and the English as a second language group \((M = 2.86, SD = 2.23)\) but non-significant.

**Confabulation Details**

The data for the number of confabulated details recalled during interviews violated the assumption of normality. Thus, transformed means were used to compute the analysis. A nonparametric Levine's test of the original data indicated that the difference in spread between the groups was statistically significant, \(F(3, 76) = 16.128, p = .001\). The four groups were compared by using an unequal variance Brown–Forsythe \(F\)-test and they were found to be significantly different, \(F(3, 76) = 4.907, p = .004, \omega^2 = .128\). The means of the total number of confabulations elicited during interviews were significantly higher for the native English speakers group \((M = 2.25, SD = 2.55)\) compared to the consecutive interpreting group \((M = .05, SD = .224)\). It should be noted that the Native English speakers provided the most substantial amount of information overall, and the consecutive interpreting group reported the least amount of information during interviews. No significant effects were found for the Polish speakers in the simultaneous interpreting
group \((M = 1.00, SD = 1.92)\) and the English as a second language speakers group \((M = 0.90, SD = 1.77)\).

**Witnesses Accuracy Rate of Memory Recall**

The percentage of accuracy of the participants (proportion of correct recall as a percentage of overall recall) based on the translated data of their native language recalls was calculated (original interview transcripts were transcribed; Polish interviews were translated into English, coded, and used for calculating the means percentage of witnesses memory accuracy). As the data violated the assumption of normality, transformed means were used to compute the analysis. The homogeneity of variance was not significant, and nonparametric Levene's, \(F(3, 76) = 2.243, p = .090\) indicated that the assumption underlying the application of ANOVA was satisfied. There was a non-significant effect for accuracy rate for memory recall, \(F(3, 76) = .471, p = .704\) across the four interpreting conditions. The overall accuracy rates for memory recollection were high in every group. The most accurate memory recall was elicited by the Polish participants in the English as a second language group \((M = 96.72, SD = .022)\), though non-significant. They were closely followed by the Native English speakers group \((M = 96.65, SD = .017)\) and the simultaneous interpreting group \((M = 96.41, SD = .031)\). Memory recollections of participants in the consecutive interpreting group were the least accurate \((M = 95.64, SD = .032)\).

**Interview Duration**

Interview duration was defined as the total amount of time spent (in seconds) interviewing each participant and was measured from the beginning of the free recall phase to the end of the interview. The test for normality and the homogeneity of variance indicated that the data for overall interview duration were statistically normal. A one-way ANOVA test revealed that there was no differences across all four conditions, \(F(3, 76) = 2.584, p = .059\). Table 1 that the consecutive interpreting condition took the longest amount of time to conduct \((M = 364.55s., SD = 135.25s.)\) followed by the native English speakers’ recalls \((M = 300.60s., SD = 123.93s.)\). The English as a second language speakers condition \((M = 272.30s., SD = 107.52s.)\) and the simultaneous interpreting condition \((M = 254.65s., SD = 67.54s.)\) took the least amount of time to conduct. The interviews varied from each other in length. The shortest interview from all four groups
lasted approximately two minutes (in the simultaneous interpreting condition), where the longest continued for nearly 14 minutes (in the consecutive interpreting condition).

**Summary of Participants’ Memory Performance**

The native English speakers reported significantly more correct information compared to all three Polish groups, including those Polish individuals free-recalling in their own language in the simultaneous interpreting condition. No significant differences were found across the four conditions for the average number of incorrect items recalled. However, the native English speakers reported significantly more confabulated details compared to those in the consecutive interpreting condition, bearing in mind that they also provided the most information about the stimulus. The duration of the recalls differed across the four interpreting conditions but at the edge of significance. The consecutive interpreting condition on average took the most extended amount of time to conduct, and the simultaneous interpreting condition took the least amount of time to execute.

**Recall of Specific Types of Details**

The numbers of correct, incorrect and confabulated details in the free recall were further sub-divided into detail types; person detail; action detail; surrounding detail; and object detail. Here again, details elicited by participants during interviews were taken into account (not the details rendered by the interpreter).

Table 2

| Correct Detail Types Recalled by Participants across the Four Interpreting Conditions |
|-----------------------------------------------|-----------------|-----------------|-----------------|-----------------|
| English Native Speakers - Free Recall in Native Language - ENGLISH | Simultaneous Interpreting - Free Recall in Native Language - POLISH | English As A Second Language - Polish Recalling in ENGLISH | Consecutive Interpreting - Free Recall in Native Language - POLISH |
| M | SD | M | SD | M | SD | M | SD |
|---------------------------|---------------------------|---------------------------|---------------------------|
| Person                   | 37.00*                   | 14.73                     | 24.80*                   | 12.43                     | 24.75*                   | 9.89                     | 26.35*                   | 11.77                     |
| Action                   | 73.20*                   | 29.90                     | 42.35*                   | 15.68                     | 43.60*                   | 21.98                     | 41.40*                   | 17.13                     |
| Surrounding              | 50.50*                   | 18.24                     | 35.10*                   | 14.40                     | 40.55*                   | 17.73                     | 27.30*                   | 11.86                     |
| Object                   | 3.75*                    | 2.49                      | 2.60                      | 2.04                      | 1.70*                    | 1.17                      | 1.85*                    | 1.46                      |

Note * p < .001
A series of one-way ANOVA tests on transformed data were performed on these data. As the recall analysis revealed only significant differences across conditions for the number of correct details and no effects for incorrect and confabulated units, Table 2 presents only the totals of means for correct types of information recalled according to interpreting conditions.

**Person Details**

The native English speakers reported significantly more correct person information, $F(3, 76) = 4.577, p = .005$ than the three other interpreting conditions. The $\omega^2 = .116$ indicated that approximately 12% of the variation in the number of correct person details recalled was attributed to differences between the four groups of interpreting. The native English speakers reported significantly more correct person information ($M = 37.00, SD = 14.73$) compared to the consecutive interpreting condition ($M = 26.35, SD = 11.77$), the simultaneous interpreting condition ($M = 24.80, SD = 12.43$) and the English as a second language speakers condition ($M = 24.75, SD = 9.89$). No significant differences were found between all three groups comprised of Polish natives.

**Action Details**

Significant differences across the four conditions were found for the correct action information recalled by the participants, $F(3, 76) = 9.904, p = .001, \omega^2 = .25$. The native English speakers group ($M = 73.20, SD = 29.90$) elicited significantly more correct action details compared to the English as a second language speakers group ($M = 43.60, SD = 21.98$), the simultaneous interpreting group ($M = 42.35, SD = 15.68$), and the short consecutive interpreting group ($M = 41.40, SD = 17.13$). No significant effects were found across the three conditions with Polish participants.

**Surrounding Details**

Significant differences were found across condition for the correct surrounding details variable, $F(3, 76) = 7.642, p = .001, \omega^2 = .199$. The native English speakers condition ($M = 50.50, SD = 18.24$) recalled significantly more correct surrounding information compared to the two groups aided by an interpreter; the simultaneous interpreting condition ($M = 35.10, SD = 14.40, p = .015$) and the consecutive interpreting
condition \((M = 27.30, SD = 11.86, p = .001)\). There was also a significant effect concerning the type of interpreting condition on memory for correct surrounding information between the English as a second language speakers condition \((M = 40.55, SD = 17.73, p = .046)\) and the consecutive interpreting condition. Polish participants recalling information in English recalled significantly more correct surrounding details than the participants in interviews facilitated by an interpreter.

**Object Details**

A significant statistical effect was found for correct object details recalled during interviews, \(F(3, 76) = 5.066, p = .003, \omega^2 = .162\). The native English speakers condition \((M = 3.75, SD = 2.49)\) elicited significantly more correct object information than the consecutive interpreting condition \((M = 1.85, SD = 1.46, p = .004)\) and the English as a second language speakers condition \((M = 1.70, SD = 1.17, p = .010)\). No significant effects were found for the correct object recall of the simultaneous interpreting condition \((M = 35.10, SD = 14.40)\) compared with other groups.

**Conversation Details**

The numbers of correct, incorrect, and confabulated details elicited during interviews were further sub-divided into conversation detail categories (The data was still coded directly from translated transcripts of witnesses’ narratives). The conversation category contained a conversation person, conversation gist, and conversation verbatim. The means and standard deviations of conversation details for each of the four groups can be seen in Table 3 (for the conversation person category, only correct identification of a burglar and his words are displayed as not many participants pointed out an incorrect or confabulated person speaking during the burglary).

The test for normality indicated that the data for conversation details were statistically normal. However, Levine's test signified that the difference in spread between the groups was statistically significant, \(F(3, 76) = 7.256, p = .001\). The four groups were compared using an unequal variance Brown–Forsythe \(F\)-test. There was a significant difference across conditions for the correct conversation verbatim category, \(F(3, 76) = 5.633, p = .002, \omega^2 = .172\). The native English speakers remembered significantly more conversation verbatim details (e.g. “I don’t know how to drive, I don’t have a license”) \((M\).
than participants in the consecutive interpreting condition \((M = 0.20, SD = 0.75)\) (although burglars in the stimulus were communicating in turns in both Polish and English, and Polish music played in the car while the youngsters were escaping). No other significant effects were found.

Table 3

<table>
<thead>
<tr>
<th>Conversation Detail Category across the Four Interpreting Conditions</th>
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<tr>
<td></td>
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<tr>
<td>--------------------------------</td>
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<tr>
<td>M</td>
</tr>
<tr>
<td>Person Correct</td>
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<tr>
<td>Gist Correct</td>
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<tr>
<td>Gist Incorrect</td>
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<tr>
<td>Gist Confab.</td>
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<tr>
<td>Verbatim Correct</td>
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<tr>
<td>Verbatim Incorrect</td>
</tr>
<tr>
<td>Verbatim Confab.</td>
</tr>
</tbody>
</table>

Note * \(p < .001\)

Summary of Recalling Specific Types of Details

The native English speakers remembered the significantly more correct person and action details than the three other conditions. The native English speakers also recalled significantly more correct surrounding details than the two groups aided by an interpreter. The native English participants elicited significantly more correct object information than the consecutive interpreting group and the English as a second language speakers group. Memory for conversation verbatim details was higher in the native English speakers group, who remembered more dialogue information than participants in the consecutive interpreting condition significantly. There was only one statistically significant effect found between three groups containing Polish natives. English as second language speakers reported significantly more surrounding information than the participants in the consecutive interpreting condition.
Interpreting Accuracy

The two groups, aided by an interpreter, the simultaneous interpreting condition, and the consecutive interpreting condition, were measured for the interpreter's misinterpretations. The data for this analysis was based on the interpretations done by the interpreters taking part in the study and later compared with the translation of transcripts conducted for the control purpose.

The number of correct interpretations, incorrect interpretations, omissions or failures to interpret, new information-inclusions added by an interpreter, and new information-confabulations rendered by the interpreter were calculated for each interpreting method (see Methodology chapter: Coding and Scoring Section for more details). A rate of interpreting accuracy (calculated by dividing the total number of correct interpretations by the total number of reproduced interpretations) across the two conditions was computed. Table 4 shows the mean and standard deviation for the interpreters' performance according to the interpreting method.

Table 4

<table>
<thead>
<tr>
<th>Interpretation Accuracy for Two Interpreting Conditions</th>
<th>Simultaneous Interpreting Free Recall in Native Language - Polish</th>
<th>Consecutive Interpreting - Disruptive Free Recall in Native Language – Polish</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interpretation Accuracy (%)</td>
<td>86.84* (SD = 6.38)</td>
<td>91.86* (SD = 7.25)</td>
</tr>
<tr>
<td>Total incorrect interpretations</td>
<td>1.60 (SD = 1.39)</td>
<td>1.20 (SD = 1.51)</td>
</tr>
<tr>
<td>Total interpretation omissions</td>
<td>5.60 (SD = 3.62)</td>
<td>3.25 (SD = 4.61)</td>
</tr>
<tr>
<td>Total new info-inclusions</td>
<td>0.35 (SD = 0.59)</td>
<td>0.60 (SD = 0.99)</td>
</tr>
<tr>
<td>Total new info-confabulations</td>
<td>0.35 (SD = 0.74)</td>
<td>0.10 (SD = 0.31)</td>
</tr>
</tbody>
</table>

Note * p < .001

The consecutive interpreting condition (N = 20) was associated with higher interpreting accuracy $M = 91.86\% \ (SD = 7.25)$. By comparison, the simultaneous interpreting condition (N = 20) was associated with a numerically smaller interpreting accuracy $M = 86.84\% \ (SD = 6.38)$. To test the hypothesis that the consecutive interpreting and simultaneous interpreting were related to statistically significant different means of
interpreting correctness, an independent sample $t$-test was performed. The distributions of both conditions were sufficiently normal for the purpose of conducting a $t$-test (Schmider, Ziegler, Danay, Beyer, & Buhner, 2010). Additionally, the assumption of homogeneity of variances was tested via Levene’s $F$ test, $F(38) = 144, p = .706$. The independent sample $t$-test was associated with a statistically significant effect, $t(38) = 2.322, p = .026$. Thus, the consecutive interpreting condition was related to statistically significantly larger correctness of interpreting means than the simultaneous interpreting condition. Cohen’s $d$ was estimated at .734, which is a medium effect based on Cohen’s guidelines (1977, 1992).

The independent sample $t$-tests were performed on the different types of the misinterpretations across two interpreting methods and no significant effects were found. The total means of incorrect interpretations in the simultaneous interpreting condition ($M = 1.60, SD = 1.39$) were higher than means of the consecutive interpreting condition ($M = 1.20, SD = 1.5$), $t(38) = -.872, p = .389$. The average number of interpretation omissions were higher for the simultaneous interpreting method ($M = 5.60, SD = 3.62$) than for the consecutive interpretation technique ($M = 3.25, SD = 4.61$), but not significantly, $t(38) = -1.793, p = .081$. Similarly, the independent sample $t$-test had no statistically significant effect, $t(38) = .968, p = .339$ for means of interpreter adding new information-inclusion in the simultaneous interpreting condition ($M = .35, SD = .59$) and the consecutive interpreting condition ($M = .60, SD = .99$). The average numbers of an interpreter adding a new information-confabulation to the interpretations were higher for the simultaneous interpreting method ($M = .35, SD = .74$) than for the consecutive interpretation technique ($M = .10, SD = .31$), though not significantly, $t(38) = -1.387, p = .178$.

Interpreting Accuracy Versus Interpreters’ Individual Differences

To analyse whether the interpreters’ individual differences influenced the accuracy rate of the interpretation produced, an independent sample $t$-test was computed. The assumption of homogeneity of variances was measured by Levene’s $F$ test and met, $F(38) = 2.430, p = .127$. An independent sample $t$-test indicated that interpreting accuracy scores were significantly higher for Interpreter Number 2 ($M = 92.33\%, SD = 5.48, t(38) = -3.691, p = .001$) who had interpreted 24 interviews during this study (14 utilising the consecutive interpreting method and 10 using the simultaneous interpreting technique) and had 12 years of police interpreting experience. The correctness of interpretation produced
by Interpreter Number 1 \((M = 84.87\%, SD = 7.30)\), who had interpreted 16 interviews (six using the consecutive interpreting method and 10 using the simultaneous interpreting technique) and had eight years of police interpreting experience was significantly less accurate. Cohen's \(d\) was estimated at 1.17, which illustrated a large effect based on Cohen's guidelines (1977, 1992). The independent sample \(t\)-test was also associated with a statistically significant effect on interpreting omission, \(t(38) = 3.117, p = .003\). Interpreter number 1 omitted statistically more details \((M = 6.75, SD = 4.16)\) than interpreter number 2 \((M = 2.88, SD = 3.64)\). Cohen's \(d\) was estimated at .986, which shows a large effect based on Cohen’s guidelines (1977, 1992).

**Interpreting Accuracy and Sequence of Interpretations**

To assess if a cognitive bias (the interpreter’s previous knowledge of an event gained through interpreting the same stimulus with a number of participants) affected accuracy of interpretation, Spearman Rank Order Correlation (rho) was computed. Spearman’s rho correlation assessed the relationship between the interpreter’s sequences of the interpreted interviews and the interpretation accuracy for the two individual interpreters taking part in the study. There were non significant correlations between interpreter number one and the interpreting accuracy, \(rho(18) = .26, p = .34\), two-tailed. However, there was a significant negative correlation between interpreter number 2 and her interpretation accuracy, \(rho(22) = -.48, p = .016\), two-tailed. The direction of the relationship between these two variables was medium negative. The amount of interpreted interviews by interpreter number 2 was associated with lower scores in interpretation accuracy at the medium strength of this correlation. To calculate how much variance the two variables shared (order of interpretation completed by interpreter number 2 and the overall accuracy of her interpretations), the coefficient of determination was computed. A correlation of \(rho = -0.48\) had a 23.04 per cent shared variance. The results seemed to indicate that as the interpreter got to know the event, their interpreting accuracy level decreased.

**Influence of Interpreter Misinterpretations on the Accuracy of Witnesses Memory Recall**

The two groups facilitated by an interpreter were measured not only for their reporting of details but also for possible recall errors caused by the interpreters' failure to
report accurately what the witnesses said in their native language. To analyse whether the interpreters' interpretation inaccuracies affected witnesses' evidential information, an independent-sample t-test was calculated, contrasting witnesses' accuracy rates (computed from interviewees' own speech transcripts) with the accuracy scores based on the interpreters' interpretations (computed from the verbal interpreter interpretations). The new accuracy scores in the consecutive interpreting group were associated with $M = 95.57\% (SD = .036)$ compared to the native language accuracy $M = 95.64\% (SD = .032)$. The interpreted accuracy scores of participant recollections in the simultaneous interpreting condition were associated with $M = 95.93\% (SD = .033)$ compared to the original witness accuracy rates $M = 96.41\% (SD = .031)$. The details rendered by the interpreters and the details recalled by the witnesses were positively correlated, Pearson’s $r(38) = .987, p < .001$. The correlation revealed a significant overlap between the details in the interpreters' interpretations and the witnesses' oral information. This finding indicates that the interpretations which are given by the interpreters accurately depicted the information provided by the interviewees, suggesting that interpreting errors did not affect witness evidence.

**Language Proficiency and its Affect on Memory Performance**

To investigate whether English fluency affected the amount of recall in English as a second language condition, Polish participants in this group were divided into fluent English speakers (Individuals whose Cambridge English exam score was less than 21 points) and proficient English speakers (Individuals whose Cambridge English exam score was 22 points and above). Table 5 presents the number of overall performance means for types of information (correct details, incorrect details, confabulations, and memory accuracy rate for the English as a second language speakers condition) according to the advanced English proficiency level of the participants and their interview duration.

An independent-sample t-test was conducted to compare the overall recall scores for the proficient English and the fluent English groups. No significant difference in scores was found for recalling correct details for the proficient English speakers ($M = 117.30, SD = 50.03$) and the fluent English speakers ($M = 106.90, SD = 41.47, t(18) = 0.51, p = .83$. The magnitude of the difference in means (mean difference = 10.40, 95% CI: -53.68 to
32.88) was small (eta squared = .014). These results suggest that advanced language proficiency, such as fluent or proficient levels did not affect recalling correct details.

### Table 5

*Memory Performance of the Polish Participants Recalling in English*

<table>
<thead>
<tr>
<th></th>
<th>Fluent English Speakers</th>
<th>Proficient English Speakers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Total Correct Details</td>
<td>106.90</td>
<td>41.47</td>
</tr>
<tr>
<td>Total Incorrect Details</td>
<td>2.60</td>
<td>2.37</td>
</tr>
<tr>
<td>Total Confabulations</td>
<td>1.00</td>
<td>1.70</td>
</tr>
<tr>
<td>ESL Speakers Accuracy Rate %</td>
<td>96.74</td>
<td>2.12</td>
</tr>
<tr>
<td>Duration of recalls (seconds)</td>
<td>114.10</td>
<td>41.57</td>
</tr>
</tbody>
</table>

There was a non-significant difference in scores for recalling incorrect and confabulated details for the proficient English speakers ($M_{\text{incorrect}} = 3.50$, $SD_{\text{incorrect}} = 2.32$, $M_{\text{confabulations}} = 1.20$, $SD_{\text{confabulations}} = 1.87$) and fluent English speakers ($M_{\text{incorrect}} = 2.60$, $SD_{\text{incorrect}} = 2.37$, $M_{\text{confabulations}} = 1.00$, $SD_{\text{confabulations}} = 1.70$; $t_{\text{incorrect}} (18) = .85, p = .40$, $t_{\text{confabulations}} (18) = 0.25, p = .80$). These results suggest that advanced language proficiency did not have an affect on recalling incorrect or confabulated details. There was also no significant difference in the scores for the speakers of a second language overall accuracy rate for the fluent English participants condition ($M = 96.74$, $SD = 2.12$) and proficient English participants condition ($M = 96.15$, $SD = 2.29$), $t(18) = .43, p = .67$. Lastly, no significant effect was found for differences in scores for the interview duration in the proficient English speaker cluster ($M = 132.50s$, $SD = 51.06$) and the fluent English group ($M = 114.10$, $SD = 41.57$), $t(18) = 0.88, p = .39$. The results suggest that advanced English proficiency did not affect the accuracy of recalls and duration of a non-native English speakers the police interview. It should be noted that the results were computed with a low sample size (N=20) hence the power of the test is lower.

### Control Measures

To ensure that any differences were not due to extraneous factors, the interviewer's effect on participants' memory recall was investigated. The relationship between the interviewer sequence numbers of the conducted interviews and the total number of correct
recall scores, as well as the overall witnesses' memory accuracy, were investigated using Spearman's rho correlation. There was no significant correlation between the interviewer's interview sequence numbers, and the amount of correct recalled details, \( \text{rho}(78) = -0.06, p = .59 \), two-tailed. There was also no significant correlation between the witnesses' accuracy of memory performance and the interviewer's interview order number, \( \text{rho}(78) = -0.08, p = .45 \), two-tailed. These results suggest that the interviewer did not affect participants' memory recalls.

Chapter Summary

This chapter has provided an analysis of the results of the four distinct interpreting conditions designed to explore interpreter meditated police interviews with a particular interest in the free recall phase. The main findings can be summarised as follows. In regards to overall memory performance, the native English speakers reported significantly more correct details of the stimulus compared to all three Polish groups, including those Polish individuals free-recalling in their own language. The free recall without an interpreter present (even in another room using the simultaneous interpretation condition) resulted in a more considerable amount of information elicited by Polish participants (non-significant). Even though Polish participants recalled information in their second language, they still reported more information than their Polish participants speaking in their native tongue through an interpreter (non-significant).

Considering the recollection of specific types of details, the native English speakers remembered the significantly more correct person and action details than the three other conditions. The native English speakers also recalled significantly more correct surrounding details than the two groups that were aided by an interpreter. The native English participants elicited significantly more correct object information details than the consecutive interpreting group and the English as a second language speakers group. Memory for conversation verbatim details was higher in the native English speakers group, who remembered more dialogue information than participants in the consecutive interpreting condition significantly. There was only one statistically significant effect found between the three groups containing Polish natives. The English as second language
speakers reported significantly more surrounding information than the participants in the consecutive interpreting condition.

In regards to the two interpreting methods, the consecutive interpretation technique was significantly more accurate than the simultaneous interpretation method, with the margin at the edge of significance for time variations. The amount of time used for consecutive interpreting was much more than the amount of time used for the simultaneous interpreting condition. The interpreters made mistakes while interpreting, but their misinterpretations during the interviews did not affect the witnesses' evidence. The differences between the two interpreters (e.g., interpreting experience) significantly affected their interpreting accuracy. Additionally, as the interpreters' knowledge of the stimulus increased, the accuracy of their interpretation decreased - especially for Interpreter Number 2, who assisted 24 interviews. Varied advanced English language proficiency did not affect the accuracy of the interviewees’ narratives or their duration of the English as a second language interview.
Chapter 5: Discussion

The purpose of this final chapter is to situate the findings of the present study in the context of the theoretical notions put forward in the literature review as the attempt to answer the initial research questions. This chapter is comprised of three main sections. In the first section, the main research findings are presented with respect to police interpreting and non-native English eyewitness interviewing. The second section discusses the contributions and limitations of the research project and presents the research implications concerning practical applications for current practice. The last section proposes recommendations for further research. For the convenience of the discussion, the study aims will be broken into sub-categories. The first of which is presented below.

What is the Effect of the Interpreter’s Presence on the Quality and Quantity of Information Elicited from Non-native Speakers in the Free Recall Stage of the CI?

This research represents an initial step towards an empirical assessment of whether an interpreter can influence memory retrieval during a free recall in an investigative interview. The first question asked by this study was; what is the effect of the interpreter's presence on the quality and quantity of information elicited from non-native speakers in the free recall stage of the CI? The question stemmed from a lack of understanding concerning how the interpreter's interpreting disruptions affect the interviewee’s conscious effort to search their memory to recall information. Concerning the quantity and quality of evidential data, this research found that free recall without an interpreter present, even in a separate room while applying a simultaneous interpreting condition, resulted in a greater amount of information elicited by Polish participants. Polish participants speaking in English, a second language for them, also reported more information compared to their native participants who were assisted by an interpreter. Although the differences between these three conditions containing Polish witnesses are not statistically significant enough to support Hypothesis 1 and Hypothesis 2, they do reveal an inclination that the presence of an interpreter influenced the amount of witnesses recall. These findings are in
alignment with the research of Ewens et al. (2014; 2016; 2017) who also found that the interviewees who spoke through an interpreter provided less detail than interviewees who spoke in their native or foreign language (English) without an interpreter.

It is possible that the interviewees who spoke through an interpreter did not recall as many details as their Polish colleagues did (who elicited information in a second language) because of their differences in memory capability. Research into the effect of learning or knowing a second language suggests that individuals who speak one or more dialects have better overall cognitive abilities, memory and memorisation skills (including better working memory), and improved concentration and attention than individuals who speak only one language (Luke et al., 2011; Stavrakaki et al., 2012; Morales et al., 2013). It could be possible that Polish natives eliciting information in English were able to recall more details than those participants who were aided by an interpreter because their ability to speak in a foreign language enhanced their working memory skills and improved their cognitive abilities, making them more attentive witnesses. But then again, research implies that those who speak in a non-native language are unable to express themselves as they would in their first language due to vocabulary deficiencies (Huang, 2010). Yet Polish participants recalling details in English were able to outperform their native participants talking in Polish, their native language, through an interpreter. The non-native participants’ grasp of English varied, as some were less proficient than others, which reflected real life circumstances.

When the results of language proficiency were taken into consideration while examining the quality and quantity of information elicited by interviewees communicating at a fluent English level and a proficient English level, the differences between them were not significant. This result seems to suggest that being fluent or proficient in a foreign language does not necessarily change the amount of recall or the accuracy of recall. However, this research design used a relatively small sample size for English as a second language condition (N = 20). Thus, further investigation is needed to examine whether language proficiency at higher levels affects witness recollections. Regardless of whether or not some Polish participants spoke better English than others, however, they still reported more information compared to Polish participants who spoke through an interpreter. Perhaps the presence of an interpreter made Polish speaker more concise because of the awareness of someone next door.
This experimental design had two different control groups; the native English speakers control group and the English as a second language control group. To determine whether it was the presence of an interpreter that influenced witness recollection or if it was due to some other variable, another control group comprised of only Polish participants recalling information in Polish could have been used. Without this set in place, one cannot be guaranteed that the presence of an interpreter could actually have inclined Polish speakers to hold back information and recall fewer details. Perhaps future research could include such a condition in its design and yield more answers to this vital question.

A further intriguing aspect of the results is the fact that all three Polish groups reported significantly less detail than the native English speakers, supporting the first part of Hypothesis 1. These findings are consistent with those of Ewens et al. (2014; 2016; 2017) where British individuals gave more information than non-native speakers - including participants who elicited information in their language as it was in the case of this study. It appears reasonable to suggest that cross-linguistic differences influence how second language speakers remember an event (Lucy, 1997), and later, how they report it (Tannen, 1993). It is possible that British speakers said more because they were British, and the interviews were conducted in England. This idea is in alignment with the conclusions of Liebes and Katz (1990), who found that eyewitness narratives from various countries differed according to what information individuals believed should be reported, and how that information should be reported. When Koven (2001) asked participants to tell the same story, but in two different languages, the recalls of the same story varied according to the language in which they were shared. Perhaps British speakers are paying more attention to detail as compared with Polish participants who, like Russians, give more abstract and generalised accounts of events (Liebes & Katz, 1990). Hence, the results may be affected by cultural differences. Considering the bilingual nature of research done by Ewens et al. (2014; 2016; 2017) together with this study, it seems necessary to conduct further research into British participants reporting information in their second language and their native language through an interpreter. The findings could then be compared with witness recollections from other countries.

Concerning the quantity of evidential data, no significant differences emerged in the proportion of incorrect information provided across the four conditions - although the
participants in the consecutive interpreting condition, along with the native English speakers, reported the most incorrect details. From the police investigative perspective, any false evidence cannot be regarded as beneficial to the case. Perhaps the Polish participants talking through an interpreter in the consecutive interpreting mode were the least accurate in their recollections because the interpreters made mistakes when interpreting their narratives. As interpreters are human, they may make mistakes, including errors when editing the responses given by the interviewees (Nakane, 2009). It has been pointed out that interpreters sometimes use the incorrect equivalent of words or omit details reported by interviewees (Mulayim et al., 2015). Although both interpreters made interpreting errors in this study, the analysis of misinterpretations (witnesses spoken words versus interpreter’s interpretations) revealed that the overall accuracy of participant’s memory performance was not affected by interpreting errors. These findings are in alignment with those of Ewens et al. (2017) who also found that loss of information due to interpretation mistakes was not substantial and that interpreters’ interpreted interviews gave a good indication of the details provided by the interviewees.

The native English speakers reported significantly more confabulated details compared to those in the consecutive interpreting condition, but they also provided the most information about the stimulus. The fact that the amount of reported confabulated details reached a level of significance deserves attention. Confabulated information occurs when the witness fills in the memory gaps of an event with imagined details and is by its very nature wholly false and entirely inaccurate. Reported confabulations can harm any criminal investigation and can even change its direction (Milne & Bull, 1999). Only accurate information is accepted as useful in a criminal investigation. Although the number of confabulated details reported by the native participants was significantly higher than the quantity of confabulated details reported by participants in the consecutive interpreting condition, the confabulation proportion of the total correct details was low overall (1.37% of confabulations elicited by the native English speakers compared to .05% confabulations reported by the witnesses in the consecutive interpreting condition).

Little difference was found between participants’ overall accuracy rate across interpreting conditions, with no meaningful variances. As the experiment had only a short delay (5 minutes) between the stimulus and the interview, similar to other studies examining adult memory recall (e.g., Prescott et al., 2011) the overall accuracy rate was
high across all four conditions. All groups apart from the consecutive interpreting condition (which had approximately 96% of interpreting accuracy) had almost the same level of accuracy (approximately 97%). The slightest suggestion that the accuracy of evidential material might be compromised due to the usage of a particular technique for gathering information brings into question the utility of that technique for crime investigation purposes. In this research, neither of interpreting condition compromised the accuracy of witness evidence considerably.

When considering the recollection of specific types of details, the native English speakers were superior to the other three groups in remembering the action and person information. In fact, action details were what participants remembered the most. This finding echoes most adult research, such as the exploration of Brown et al. (2008) and Miguels and Garcia-Bajos (2007) who found that eyewitnesses seem to remember more information regarding the actions of an event that the characteristics about people taking part in it. The native English speakers were also better at recollecting surrounding details compared to the two groups that were aided by an interpreter. They correspondingly remembered more object details than the consecutive interpreting group and Polish speakers recalling information in English group. These findings are consistent with research that states that during the investigative interview, the CI technique assists in remembering all of the types of evidence from the above categories (Kohnken et al., 1999). What is notable is the fact that overall, the native English speakers reported more specific types of details, including verbatim conversation details.

There was only one statistically significant effect found between the three groups containing Polish natives. Polish participants eliciting information in their second language reported significantly more surrounding information than the participants in the consecutive interpreting condition. The stimulus used for this study was deliberately staged to have Polish features, such as the Polish emblem, the Polish flag, Polish groceries, and Polish magazines. Polish music played in the car while the youngsters were escaping. The males were communicating in turns, speaking in both Polish and English. With so many Polish specific-characteristics, the Polish participants had the opportunity to provide additional details in their recall compared to the English as first language speakers. Only Polish participants reporting details in English described more surrounding details than Polish participants talking through an interpreter. The quantity of the details
reported was significant compared to the consecutive interpreting condition. It seems that perhaps the Polish participants’ cultural background influenced what they remembered about the stimulus and or the presence of an interpreter. Though it seems more likely that the interpreter’s disruptions might have hampered memory retrieval, such a conclusion would require further investigation.

**What is the Best Method to Interview Non-native Speakers in the Free Narrative Stage?**

The second main area of this research was to explore how non-native speakers can be interviewed, preserving the CI principle of uninterrupted, free recall. Hence, the design introduced the simultaneous interpreting sub-variant method. It was hypothesised that placing an interpreter in a separate room from an interviewee would create an opportunity for a greater recall of information as the process of interpreting would not interrupt concentration and memory recollection (Vrij et al., 2014). The presence of an interpreter in another room would also allow the principles of the CI to remain intact. This research found that Polish speakers in the simultaneous interpreting condition indeed reported more details than participants in the consecutive interpreting condition, but the difference was not significant (rejecting Hypothesis 3). Perhaps the interviewees were aware of the interpreter being in another room and kept their recalls more concise.

Research has shown that when people are using a communication aid such as an interpreter, they tend to keep their recollections shorter than they usually would in a non-interpreter condition (Boser, 2013). In their research, Ewens et al. (2017) also found no meaningful differences between the amount of detail recalled by participants with an interpreter seated inside the room or outside the room. One might speculate that having the interpreter that was invisible to the interviewee may have triggered lower rapport between both parties which in turn may have caused an interviewee to feel less positive about the interpreting interaction, thus volunteering less information (Soufan, 2011). However, the Polish participants in this study who were aided by an interpreter had an opportunity to meet the linguist before conducting the interview, allowing a brief opportunity for rapport building to take place. They also were reassured that if they needed any direct assistance from an interpreter, it would be provided.
Notably, the witnesses who were questioned using the consecutive interpreting technique elicited the least amount of details compared to all other groups. This result means that witnesses presently do not elicit the amount of evidence they potentially could while utilising the current police interpreting method. This finding stresses essential implications for police interviewers and interpreters. Law enforcement should be aware of the limitations of applying consecutive interpretation to the free recall segment of the interview. Why did the consecutive interpreting method result in the lowest quantity of details remembered? One possible reason for this occurrence is that the constant interruptions have an impact on the interviewees' abilities to concentrate and access their memory. As a result, the interviewees are less focused on the task of eliciting information, hence producing more partial responses (Milne & Bull, 1999).

Research has also suggested that any disruption may break the person's train of thought and stop the flow of information, potentially preventing important facts from emerging (Fisher & Geiselman, 1992; 2010). It appears that the segmentation of the interviewee's disclosure in consecutive interpreting disrupted the flow of the free narrative, which can be observed in the amount of information reported by the witnesses aided by an interpreter in the consecutive mode. Perhaps, the Polish participants talking through an interpreter in the consecutive interpreting could have been discouraged by the interpreter's interruptions of their narratives and thus continued their story by narrowing it down.

Furthermore, the witnesses were possibly keeping their utterances short, so they would not overload the interpreter with too much information, as was found to be the case in Boser’s research (2013). Ewens et al. (2017) found that almost one-third of their research participants would have elicited more details if they would have had an opportunity to recall information in their own language without an interpreter. There may be other possibilities why the consecutive interpreting technique is less effective with free recall accounts, which are worth exploring in detail. Further research could elaborate on this subject as this study shows that so far, interpreters are not being used as efficiently as they could be to gain the most enormous amount of information possible.
Which Method is the Most Efficient in Regards to Time Spent?

Another focus of this research was to explore which interpreting condition is the most time efficient. The length of an investigative interview is particularly crucial within police settings, as the extra time that it takes to communicate through an interpreter has been a major complaint of police officers (Hale & Gibbons, 1999). In the research, it was found that the duration of the recall differed widely across the four interpreting conditions approaching significance ($p = .059$) between the two interpreting methods: the simultaneous interpreting technique and the consecutive interpreting method. The modified simultaneous interpreting condition took less amount of time (two-thirds) to complete compared to the consecutive interpreting condition and elicited more evidential detail.

However, when a comparison was made between what the interpreter reported and what the interviewee actually said while employing both interpreting techniques, the modified simultaneous interpreting method was significantly less accurate. As simultaneous interpreting involves performing multiple cognitive tasks simultaneously, it is quite complicated to execute (Gile, 1995; Lai, 2016). It involves the interpreter listening in one language, interpreting into a second language, and talking at the same time. Hence, it was predicted that it would be less accurate (Hypothesis 4). With differences in accuracy of interpretation emerging between the two interpreting conditions, common sense might dictate that when the time is of the essence, law enforcement would prefer to use the modified simultaneous interpreting condition. However, research suggests that in some instances, the consecutive interpreting can save the most time by preventing errors, which would have been backtracked otherwise (Russell, 2002). This present research proposes that the modified simultaneous interpreting method could be a suitable alternative to the current police-interpreting model. It would have to be executed by a skilled interpreter, which brings us to consider the individual differences between interpreters found in this research.

Which Interpreting Method is Most Accurate?

Although this question has been partly answered in the previous section, it requires further clarification. This research found that the consecutive interpreting method was significantly more accurate (92%) compared to the modified simultaneous interpreting
method (87%). These findings are in line with the views of other scholars (Russell, 2002; 2005). Interpreting, whether simultaneous or consecutive, is a highly complex task where language perception, comprehension, interpretation, and production of speech are carried out virtually at the same time (Russell, 2005). This is especially apparent when the interpretation must be delivered simultaneously under severe time restraints (Tommola & Hyönä, 1990). More than consecutive interpreting, the experience, and skills of an interpreter play a critical role in simultaneous interpreting (Russell, 2002; 2005). The expertise and competence of the linguist were found to have implications in this research as the individual differences between interpreters significantly affected interpreting accuracy.

There was a significant difference (24%) in the accuracy scores for interpreter number 1 and interpreter number 2, which might be attributed to their practical experience. Interpreter number 2 had more professional experience (12 years) than interpreter number 1 (8 years), which was evident in their interpreting accuracy scores. This finding is in alignment with research that also found that experienced interpreters are superior at word recall and sentence processing tasks when compared to less experienced interpreters (Köpke & Nespoulous, 2006; Signorelli, 2008; Tzou, 2009). The same two interpreters were used to interpret all the interviews. They became familiar with the stimulus details only by interpreting witnesses’ narrative. As the interpreters' knowledge of the stimulus increased, the accuracy of their interpretation decreased. The lower level of accuracy was especially noticeable for the more experienced Interpreter Number 2, who facilitated more interviews than her colleague (24 interviews compared to 16 interviews). Although she was more accurate overall in her interpretations, her accuracy decreased as she became familiar with the event. This finding can have important practical implications as interpreters often work on the same cases during police investigative interviews. There is a possibility that their knowledge of the incident could have influenced their interpretation of the witnesses' testimony, therefore affecting the investigation as a whole. Thus, there is an apparent need for more research concerning situations that use the same interpreter throughout a single investigation.
Methodological Considerations

This study provided an analysis of four unique interview conditions aimed to explore interpreter meditated police interviews with a particular interest in the free recall phase of the CI. The nature of the research methodology has some limitations. Although it is vital that factors be first tested under controlled experimental conditions before evaluation in the field (Holliday, 2003), the researcher acknowledges that the results were obtained under laboratory conditions. It has been pointed out that the extreme difficulty in securing data from interpreter-mediated police interviews has been a significant obstacle to researching interpreting methods in the field (Mason, 2000; Hale, 2007). Thus, it is recommended that future research should try to access authentic data from real-life police interviews.

Furthermore, the participants were asked to watch a stimulus with the anticipation that they would be questioned in regards to what they observed. They could have made deliberate attempts to remember as many details as possible. Potentially, this could have affected the quality and quantity of information elicited. Besides, using a filmed stimulus event as opposed to a live incident may have affected the results, as witnessing a live situation may increase attention or interest. The stimulus was also short, lasting only two minutes and 45 seconds. Consequently, the interviews were short in length, varying from two minutes to nearly 14 minutes. However, in real investigative interviews, the duration of an average interview is much longer than the duration of the interviews in this research. Thus, research with real interviews could potentially produce different results. This research also did not utilise other parts of the CI or the question phase of it as these were beyond the focus of this study, however, and poses a question for future research.

Another limitation could stem from having only one researcher completing all of the interviews in this study. However, this kind of practice is common (Davies et al., 2005) and has been viewed as strength in terms of controlling interviewer variability (Memon et al., 1996). All the interviews were conducted in line with a strict interview protocol (as outlined in the method section), therefore significantly limiting interviewer variability. The research also used only two interpreters to assist with all non-native interviews. The findings show that the individual differences in experience between interpreters influenced the accuracy of their interpretation. Thus, if more interpreters had been recruited, more variance would have been created, which suggests the possibility of
more concrete effects. Further research should include a larger sample of interpreters to provide a more revealing picture of interpreter-mediated interviews.

The generalization of the present findings is limited, perhaps by the relatively small sample size given the number of comparisons made and by the use of only one language pair (English-Polish). Thus, future investigations with a more extensive data set of non-native interviewees could explore the potential effects of the use of interpreters on memory recollection in a broader context with different languages. This experimental design had one control group: the native English speakers control group. To determine whether it was the presence of an interpreter that influenced witness recollection or if it was due to some other variable, another control group comprised of only Polish participants recalling information in Polish could have been used. An additional control group such as this could offer greater insight as to whether or not interpreters make people hold back information. Perhaps, further research could include this additional condition in its design and provide a more accurate picture of the interpreter's impact on a non-native interview.

Another limitation of the research design was the method used to determine English comprehension levels of non-native participants. The Cambridge English Language Assessment measured the level of English proficiency. Cambridge English exams are designed to assess how learners use English to communicate in real-life situations. Exams are aligned with the Common European Framework of Reference for Language and are recognized by employers and institutions around the world. There are, however, more robust alternative language tests available such as the IELTS (International English Language Testing System) or TOFEL (Test of English as a Foreign Language). These tests require payment and must be taken at the Language Centre. They take a significant amount of time as they measure listening, reading, writing, and speaking skills. The Cambridge English exam that was chosen for this study was easy to apply to real-life settings, and to the time limitations of the study. Future research could use a more recognisable language test and perhaps investigate whether language proficiency affects recalling information in a non-native language.

It must also be acknowledged that the proposed modified simultaneous interpreting method might not be an appropriate technique with traumatised interviewees because the interpreter is located outside of the room. It would be challenging to assure all parties that
interpersonal communication channels are indeed open and that empathy is expressed well enough so that all parties can feel like they are fully participating in the interaction (Risan et al., 2016a, 2016b; Tipton & Furmanek, 2016). In conclusion, the author hopes that more research on interpreter-mediated police interviews will be carried out across a wide range of contexts to promote fairer legal processes.

Implications for Practice

This research found that free recalls with an interpreter placed in a separated room (modified simultaneous interpreting condition) resulted in a higher amount of information elicited by Polish participants. This result means that witnesses presently do not elicit the amount of evidence they potentially could while utilising the current police interpreting method. This finding stresses the essential implications for police interviewers and interpreters. Law enforcement should be aware of the limitations of applying consecutive interpretation to the free recall segment of the CI. Non-native speakers who understand English can be interviewed in English, their second language, as this research found that talking through interpreter results in reporting less detail than speaking in a foreign language. In regards to utilising interpreters during non-native interviews, police investigators should be aware that using one interpreter to work on the same case while assisting different witnesses could increase cognitive bias, thus decreasing the accuracy of their interpreting. Similarly, an interpreter's work experience could affect the quality of the interpretation. Considering the present lack of understanding of the effect of the interpreter's presence on the quality and quantity of information elicited from non-native speakers in the free recall stage of the CI, it is hoped that the findings of this study will help to achieve the best possible investigative outcomes in multilingual police interviews.

Recommendations

Based on the findings of this study, the researcher proposes the following recommendations. First of all, police interviewers should be warned of the possibility that they may not get as many details from interviewees who are assisted by an interpreter, especially compared to the amount of information they may obtain from native speakers.
The application of the free recall stage of the CI is compromised through the process of interpreting, which results in the CI being less efficient. It is recommended to modify certain stages of the CI to accommodate the language mediation process. An interviewee's free account without an interpreter present (even if the interpreter is in another room, in simultaneous interpreting) seems to result in recalling considerably more information. Correspondingly, it would be useful to create specialized training for the CI protocol that is mainly designed for interpreters who aim to broaden their understanding of the interview principles and hence promote more effective information gathering.

Additionally, it is recommended that police interviewers receive training on how to work with interpreters and non-native language interviewees. Officers should be aware that an interview with a foreign language speaker would take longer to conduct, especially when using the assistance of an interpreter. If the non-native interviewee speaks relatively good English, they provide more details in English, their second language, than they would provide in their first language with the aid of an interpreter. Police interviewers should also be careful when using the same interpreter for conducting several interviews regarding a single criminal case: when the interpreter's knowledge of an event increases, it seems that his/her interpretation accuracy decreases. Much of the above-identified areas of suggestions highlight the necessity for further investigation into bilingual CIs.

### Conclusion

This study represents one of the first evaluations of how the free narrative phase of the CI can be utilised more effectively with non-native speakers or with witnesses speaking through an interpreter. The research took particular interest in investigating two interpreting methods in regards to their interpreting accuracy: the consecutive interpreting method and the modified simultaneous interpreting technique.

The main findings of this study were as follow: (i) the native English speakers reported significantly more correct details of the stimulus compared to all three Polish groups, including those Polish individuals free-recalling in their own language; (ii) free recall with an interpreter in a separate room (simultaneous interpretation condition) resulted in a greater amount of information elicited by Polish participants (though not
significant); (iii) Polish participants eliciting information in their second language reported more information than the Polish participants speaking in their native language through an interpreter. In regards to the two interpreting methods, the main findings of this study were that (iv) the consecutive interpretation technique was more accurate than the simultaneous interpretation method; (v) but took the longest amount of time to apply (with a trend toward significance); (vi) the individual differences in interpreting experiences between interpreters significantly affected interpreting accuracy; (vii) as the interpreters’ knowledge of the stimulus increased, the accuracy of their interpretation decreased; (vii) the interpreters made errors while interpreting, but the loss of information due to their misinterpretations during interviews did not affect witness evidence; and finally (viii) it is better to interview subjects in their second language of the residing country if they are proficient speakers of that language, than have them recall details in their native language with the aid of an interpreter. As this is the first time that a study has considered all of these aspects together, the findings have the potential to offer a valuable alternative to current police interviewing procedures.
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Appendices

Appendix 1

The Cambridge English Language Assessment

This is a quick test. There are 25 multiple-choice questions. There is no time limit. For the questions below, please choose the best option to complete the sentence or conversation.

1. When can we meet again?
   - When are you free?
   - It was two days ago.
   - Can you help me?

2. My aunt is going to stay with me.
   - How do you do?
   - How long for?
   - How was it?

3. When do you study?
   - at school
   - in the evenings
   - in the library

4. Would you prefer lemonade or orange juice?
   - Have you got anything else?
   - If you like.
   - Are you sure about that?

5. Let's have dinner now.
   - You aren't eating.
   - There aren't any.
   - Tom isn't here yet

6. The snow was ...... heavily when I left the house.
   - dropping
   - landing
falling
descending

7. I can't find my keys anywhere - I ...... have left them at work.
   can
   must
   ought
   would

8. When a car pulled out in front of her, Jane did well not to ...... control of her bicycle.
   miss
   lose
   fail
   drop

9. According to Richard's ...... the train leaves at 7 o'clock.
   opinion
   advice
   knowledge
   information

10. When you stay in a country for some time you get used to the people's ...... of life.
    habit
    custom
    way
    system

11. The builders are ...... good progress with the new house.
    getting
    doing
    making
    taking

12. She is now taking a more positive ...... to her studies and should do well.
    attitude
    behaviour
    manner
    style

13. My father ...... his new car for two weeks now.
    has had
has
is having
had

14. What differences are there ...... the English spoken in the UK and the English spoken in the US?
    among
    between
    beside
    with

15. At 6 p.m. I started to get angry with him because he was late ......
    as usual.
    typically.
    in general.
    usually

16. ...... you get your father's permission, I'll take you skiing next weekend.
    although
    provided
    as
    unless

17. A local company has agreed to ...... the school team with football shirts.
    contribute
    supply
    give
    produce

18. I really enjoy stories that are ...... in the distant future.
    found
    set
    put
    placed

19. That old saucepan will come in ...... when we go camping.
    convenient
    fitting
    handy
    suitable
20. Anyone ...... after the start of the play is not allowed in until the interval.
   arrives
   has arrived
   arriving
   arrived

21. I didn't ...... driving home in the storm so I stayed overnight in a hotel.
   fancy
   desire
   prefer
   want

22. The judge said that those prepared to...... in crime must be ready to suffer the
   consequences.
   involve
   engage
   undertake
   enlist

23. Marianne seemed to take ...... at my comments on her work.
   annoyance
   offence
   insult
   indignation

24. You should not have a dog if you are not ...... to look after it.
   prepared
   adapted
   arranged
   decided

25. The farmhouse was so isolated that they had to generate their own electricity ......
   current.
   supply.
   grid.
   power

Adapted from Cambridge English Language Assessment, Retrieved from:

http://www.cambridgeenglish.org/test-your-english/
Appendix 2
Procedure Sheet

Before conducting the experiment

1. Email or hand deliver the recruitment letter, participant information sheet and consent form to the potential participants.

2. Ask participants with English as their second language to complete the Cambridge English Language Assessment test which is available online: [www.cambridgeenglish.org/test-your-english/](http://www.cambridgeenglish.org/test-your-english/). Ask them to make a note of their score.

3. Assign participants with English as their first language to a control group. Assign participants with upper intermediate and advanced level scores from the test to the first condition group (ESL III) as they will be interviewed without the support of an interpreter. Randomly assign the other participants to one of the two investigative interview interpreting conditions.

4. Arrange a convenient time for conducting the investigative interviews with the participants.

5. Arrange the use of an interpreter if necessary

On the day of the experiment

Allow 30 minutes per interview

6. Greet everyone and introduce the interpreter if necessary

7. Administer the documents of the experiment (if this has not been done yet): the participant information sheet and consent form
8. Clarify what will happen to the participants during the experiment and what s/he will be asked to do
9. Begin the experimental part of the study
10. Show the video of a staged burglary
11. Time delay  (Time lapse between participants subject viewing the event and subsequent recall is 5 minutes)
12. Prepare everything to be audio/video recorded
13. Take participants and interpreters to the interview suite
14. Begin recording
15. Note the interview start time on the Protocol Sheet
16. Carry out the interview (see Investigative Interview Protocol Sheet)
17. Record the interview end time on the Protocol Sheet
18. Switch off audio/video recorder
19. Debrief participants according to the guidelines for the ethical treatment of research participants
20. Thank participants for taking part in the study
Appendix 3

Investigative Interview Protocol Sheet

1. Greeting
2. Rapport building
3. Engage and Explain the purpose of the interview
4. Transfer control
   “Please tell me everything that happened in this video as best as you can remember. I would like you to tell me as much detail about the video as possible. It is important that you do not leave anything out, whether you think it is significant or not. Remember, I did not see the video, so you have all the information. You may begin whenever you are ready”
5. Free recall open prompts:
   “Tell me everything about the burglars…”
   “Tell me more about the house….”
   “Is there anything else you think I should know?”
6. Closure
   I would like to thank you for participating in this study. You are welcome to have a copy of the results at the end of this study if you wish to receive one.
Appendix 4

Recruitment Letter

Dear potential research participant,

My name is Anita Grzybek and I am a doctoral student at the University of Portsmouth. I would like to invite you to participate in my research study which is a part of a postgraduate Degree in Criminal Justice Studies. With your help, this study hopes to improve the current model of interpretation used for victims and witnesses of crime.

I want to make participation in this study as easy as possible. If you agree to participate, the whole experience will only take 30 minutes of your time and you will not need to return unless you would like to speak with someone about your experience with the study. You will have to fill out a basic multiple choice English language test with no time restraint, watch a short video of a fake burglary, and describe what you see in the video during a short interview.

Your participation is completely voluntary. You might notice that there is a unique identification number on your documents. This number simply allows me to make sure the answers you provide remain confidential.
If you decide to participate, you are still free to leave at any time before the interview material has been analysed without giving a reason. However, if you do decide to participate you will be given the participant information sheet to keep and be asked to sign a consent form.

I am happy to answer any questions you may have about this study and I can be reached by telephone at 07956 621677 or by email at icj80584@myport.ac.uk. This study has been reviewed by the Institute of Criminal Justice Studies Ethics Committee at the University of Portsmouth. If you have questions about your rights as a participant, you may contact them at 02392 843930 or by email at icjsethics@port.ac.uk.

Thank you for participating in this study.

Yours sincerely,

Anita Grzybek
Appendix 5
Participant Information Sheet

**Study Title:** Speaking in Tongues: Is the Use of Interpretation in the Free Recall Phase of the Criminal Interview a Help or a Hindrance?

**REC No:** ……………………………

I would like to invite you to participate in my research study. Before you accept my invitation I would like to help you understand why the research is being done and what your participation would involve. You should only participate if you want to; choosing not to participate will not disadvantage you in any way. Please take time to read the following information carefully and discuss it with others if you wish. Feel free to ask me about anything that is not clear or if you would like more information.

**What is the purpose of the study?**

This study aims to investigate whether using different translating techniques in the police interview impacts upon the quality and quantity of information collected from interviewees. This part of the study looks at the first part of the police questioning phase known as the free recall phase.
Why have I been invited?
You were selected as a possible participant because you are at least 18 years of age and English is your first or second language. Approximately 80 participants will be involved in this study.

Do I have to take part?
Your participation in this study is entirely voluntary. It is up to you to decide whether to join the study or not. I will describe the study and go through this information sheet. If you agree to participate I will ask you to sign a consent form.

What will happen to me if I take part?
If you agree to participate, it will only take 45 minutes to an hour of your time and you will not need to return unless you would like to speak with someone about your experience with the study. You will be asked to watch a video of a staged burglary and then you will be asked to describe what you have witnessed from the video in a short interview. The interview will last no more than 15 minutes. Your interview will be recorded. All recording instruments will be visible and no recording will take place without your knowledge and consent. The interview will be transcribed later into text. If you choose to participate, you would be welcome to have a copy of the final transcript.

Expenses and payments
As a token of gratitude compensation for taking part in this study, you will be entered into a prize drawing to win one of two £10 gift certificates. In order to protect your identity your name and contact details will be noted on a separate slip of paper for the sole purpose of the prize drawing.

What will I have to do?
You will have to fill out a basic multiple choice English language test (no time limit), watch a short video of a fake burglary, and describe what you see in the video in a short interview.

What are the possible disadvantages and risks of taking part?
A possible disadvantage might include the inconvenience of participating. There are no anticipated risks.
What are the possible benefits of participating?
There may not be any direct benefit to you from this study, but the researcher hopes to improve the current model of interpretation used for victims and witnesses of crime.

Will my participation in the study be kept confidential?
Yes. All information gathered during the course of the research will be kept strictly confidential. All materials will be stored in a locked cabinet in the researcher home and will be made available only to members of the project team. They will not be made open to researchers outside of the team.

All of the information you give will be anonymised and your name will be removed from the information. You will be identified only by a code so that those who will read the report will not know who has contributed to it. As part of the presentation of results, your own words may be used in text form. This will also be anonymised. It should not be possible to identify anyone from the reports in this study.

If you participate, it is possible that some of the data collected will be looked at by authorised persons such as supervisors from the University of Portsmouth. Data may also be looked at by authorised people to check that the study is being carried out correctly. All of these bodies are bound by a duty of confidentiality.

The results from this study will be written up in anonymised format and will be available in one of the following sources: scientific papers in academic journals, presentations at a regional conference or local seminars.

What will happen if I don’t want to carry on with the study?
If you decide to participate you are still free to leave at any time before the interview material has been analysed without giving a reason. If you withdraw from the study all data will also be withdrawn and destroyed. However, if you do decide to participate you will be given this information sheet to keep and be asked to sign a consent form.

What if there is a problem?
If you have a concern about any aspect of this study, you may contact the researcher (Anita Grzybek, phone # 07796496137, anita.grzybek@myport.ac.uk) or her supervisor (Dr Becky Milne, phone # 023 9284 3954, becky.milne@port.ac.uk). They will do their best to answer your questions. If you remain unhappy after contacting them and wish to
complain formally, you can do so by contacting the head of the Institute of Criminal Justice Dr Phil Clements at 023 9284 5069, or phil.clements@port.ac.uk.

**What will happen to the results of the research study?**
Once the study is complete, all results will be gathered and a full report will be written. The report may be published in a criminal studies journal.
Please be assured that your personal details will not be published anywhere and no one will know that you participated unless you decide to tell family or friends.
Please speak with the researcher should you wish to receive a summary of the results at the end of the study.

**Who is organising and funding the research?**
The study is being organised by Anita Grzybek, a doctoral student at the University of Portsmouth and supervised by of Dr Becky Milne of the Institute of Criminal Justice Studies. The study is being sponsored by the University of Portsmouth.

**Who has reviewed the study?**
Research at the University of Portsmouth is looked at by an independent group of people called a Research Ethics Committee to protect your interests. This study has been reviewed and given a favourable opinion by ______________Research Ethics Committee.

**Further information and contact details:**

**a) General information about the research**
If you would like to find out more information about investigative interview research, please visit *The Criminological Research For Beginners* website at [http://www.routledgetextbooks.com/textbooks/9780415509619/default.php](http://www.routledgetextbooks.com/textbooks/9780415509619/default.php)

**b) Specific information about this research project**
The main researcher, Anita Grzybek, will be glad to answer your questions about this study at any time and can inform you about the results of the study once data collection is complete. You may contact her at 07796496137, or by email: anita.grzybek@myport.ac.uk.
c) Contact details

Anita Grzybek
University of Portsmouth
Institute of Criminal Justice Studies
St. George's Building,
141 High Street, Portsmouth PO1 2HY

Concluding statement

I sincerely hope that you will be able to help me with my research. If you have any questions concerning the nature of the research or are unclear about the extent of your involvement in it, please do not hesitate to contact me.

Finally, I want to thank you for taking the time to consider my request and I look forward to your reply. If you decide to participate you will be given a copy of this information sheet to keep and your consent will be asked for.
Appendix 6
Consent Form

Study Title: Speaking in tongues:

Is the Use of Interpreters in a Criminal Interview a Help or a Hindrance?

REC Ref No: ……………………………………..

Name of Researcher: Anita Grzybek

Please initial box

1. I confirm that I have read and understand the information sheet dated………..
   for the above study. I have had the opportunity to consider the information,
   ask questions and have had these answered satisfactorily.

2. I understand that my participation is voluntary and that I am free to withdraw at
   any time without giving any reason, up to the point when the data are analysed.

3. I understand that data collected during the study, may be looked at by individuals
   from the University of Portsmouth/Transcription Services/Translation Services or
   from regulatory authorities. I give permission for these individuals to have access
   to my data.
4. I understand that a results of this study will be available via the Portsmouth University Library. In addition students, participants and other interested parties may obtain a copy on request. In addition, the results of the research may be published at a later date.

5. I agree to my interview being video or audio recorded. I understand that interviews will be transcribed at the earliest opportunity and stored as electronic documents.

6. I agree to being quoted verbatim.

7. I agree to the data I contributed being storage and retained for future, REC approved research.

8. I agree for my contact information to be retained in order to facilitate communication about his study and further potential research

9. I agree to take part in the above study.

Name of Participant: ………………………………………………………………………...

Signature: ……………………………………  Date: ………………………………………

Name of Person taking consent: Anita Grzybek

Signature: ……………………………………  Date: ………………………………………
## Appendix 7
### Burglary Coding

<table>
<thead>
<tr>
<th>Action Details</th>
<th>English Correct</th>
<th>English Incorrect</th>
<th>English Confab.</th>
<th>Accuracy of Interpreting</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Walking towards house scene</strong>&lt;br&gt;Male Nr1=1 Male Nr2=1 Male Nr3=1&lt;br&gt;Walking =1 along pavement/street =1&lt;br&gt;slowly =1 looking =1 at cars =1 over their left =1 hand shoulders =1 continue =1&lt;br&gt;walking =1 turning =1 on the corner =1&lt;br&gt;Talking =1 EN =1 Pl =1&lt;br&gt;Walking up =1 stairs =1 Male n1 and male 2 =1 puts hood on =1</td>
<td></td>
<td></td>
<td></td>
<td>Incorrect -- Interpreting distortion slight change</td>
</tr>
<tr>
<td><strong>House scene (breaking in, searching and finding the car)</strong>&lt;br&gt;Male =1 Breaks in =1 Opens =1 front door =1 Drills =1 Electric =1 drill =1&lt;br&gt;Orange =1 Black and decker =1 turns around =1 soothe =1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Stealing car scene</strong>&lt;br&gt;Male Nr1=1 Opens car =1 Male Nr2=1&lt;br&gt;opens car boot =2 puts =1 stolen =1 goods =1&lt;br&gt;Male Nr2=1 Opens =1 garage's door =2&lt;br&gt;goes inside car =3 searches =1 for ignition =1 switch =1 steering =1 wheel on left side =2&lt;br&gt;Cannot drive =2 Drives =1 stolen car =1</td>
<td></td>
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</tr>
<tr>
<td><strong>Escape scene</strong>&lt;br&gt;Male Nr1=1 Male Nr2=1 Male Nr3=1&lt;br&gt;Leaves =1 garage =1 Turns =1 right =1&lt;br&gt;goes straight =1 stops =1 at STOP =1&lt;br&gt;sign =1&lt;br&gt;Turns =1 right =1 turns right =1[twice]&lt;br&gt;Car =1 coming from =1 opposite =1 direction =1</td>
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<td>Interpretation number (Interpreter)</td>
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<td>Blue eyes=1 tall/high=1</td>
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<td>Jeans=1 black=1 Shoes: black=1</td>
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<td>Hair: black=1 short=1 husky/ chubby=1</td>
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| OBJECT DETAILS:               |                                    |                |                 |        | Incorrect – Interpreting distortion slight change | Omission - Left out | Extra info - New info inclusion | New info - Confabulation |
| Stolen car                    |                                    |                |                 |        | Incorrect – Interpreting distortion slight change | Omission - Left out | Extra info - New info inclusion | New info - Confabulation |
| Car=1 black=1 driving wheel left=1 |                                    |                |                 |        | Incorrect – Interpreting distortion slight change | Omission - Left out | Extra info - New info inclusion | New info - Confabulation |

<p>| Make: infinity=1 or 4x4=1    |                                    |                |                 |        | Incorrect – Interpreting distortion slight change | Omission - Left out | Extra info - New info inclusion | New info - Confabulation |
| Leader interior=1 creamy white=1 |                                    |                |                 |        | Incorrect – Interpreting distortion slight change | Omission - Left out | Extra info - New info inclusion | New info - Confabulation |
| Car Clock=1 11=1 20=1 am=1 |                                    |                |                 |        | Incorrect – Interpreting distortion slight change | Omission - Left out | Extra info - New info inclusion | New info - Confabulation |
| Registration plate=1         |                                    |                |                 |        | Incorrect – Interpreting distortion slight change | Omission - Left out | Extra info - New info inclusion | New info - Confabulation |
| Phone=1 7=1 3=1 9=1 3=1 8=1 |                                    |                |                 |        | Incorrect – Interpreting distortion slight change | Omission - Left out | Extra info - New info inclusion | New info - Confabulation |
| Carried items                |                                    |                |                 |        | Incorrect – Interpreting distortion slight change | Omission - Left out | Extra info - New info inclusion | New info - Confabulation |
| Electric=1 drill=1 Black=1 and decker=1 |                                    |                |                 |        | Incorrect – Interpreting distortion slight change | Omission - Left out | Extra info - New info inclusion | New info - Confabulation |
| Tool box=1 grey=1 orange and black=1 bag=1 |                                    |                |                 |        | Incorrect – Interpreting distortion slight change | Omission - Left out | Extra info - New info inclusion | New info - Confabulation |
| Keys=1 mobile phone=1        |                                    |                |                 |        | Incorrect – Interpreting distortion slight change | Omission - Left out | Extra info - New info inclusion | New info - Confabulation |
| Beer=1 coke=1 stolen things=1 |                                    |                |                 |        | Incorrect – Interpreting distortion slight change | Omission - Left out | Extra info - New info inclusion | New info - Confabulation |</p>
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<th>SURROUNDING DETAILS</th>
<th>English Correct</th>
<th>English Incorrect</th>
<th>English Confab.</th>
<th>Correct</th>
<th>Accuracy of Interpreting</th>
<th>Extra Info</th>
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<td>Wide =1 road =1 cracks =1 on the road =1</td>
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### Conversation Details

Correct details (separated into 3 categories):

<table>
<thead>
<tr>
<th>Dialog in English</th>
<th>Dialog in Polish</th>
<th>Person</th>
<th>Verbatim exactly what was stated</th>
<th>Get The idea of what was stated</th>
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<tbody>
<tr>
<td>→ Man, we have to be quick and I'm out of here dude → I am going back to Poland, get the F... house → → → → → → → → → There is an American flag here → → → → → Yes, there are some tools here</td>
<td>→ This is your last ... → Look, I used to steal cars like this in Poland → How much you could sell them for? → Practically for free, for a few thousands, man... stolen cars... (noise) → Listen, this is how we going to do this → Gruby (fatty) go upstairs → Be quiet, someone could be here. Okay I am going to see downstairs → → → → → → → → → →</td>
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</table>