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An Overview of Forensic Linguistics and its Application in Real-Life Cases.

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ABSTRACT

Forensic linguistics is an emerging multidisciplinary field within applied linguistics that focuses on the various intersections between language and law. To ensure a fair and effective legal process, it is crucial to have an understanding of linguistic principles in order to avoid misinterpretations or misunderstandings. This study provides a general overview of the expansive field of forensic linguistics and highlights its diverse contributions to the criminal justice system. It provides a summary of prominent legal cases and analyses the intersection between forensic linguistics and applied linguistics. Therefore, this end-of-degree paper aims to demonstrate how this field of linguistics can play a key role when it comes to solving legal cases. To develop such analysis, this investigation will be making reference to multiple distinguished forensic linguists and their involvement in solving legal and criminal cases.

Keywords: forensic linguistics, authorship attribution, forensic phonetics, legal cases.

RESUM

La lingüística forense és un camp multidisciplinari emergent dins de la lingüística aplicada que se centra en les diferents interseccions entre la llengua i el dret. Per garantir un procés legal just i eficaç, és crucial tenir una comprensió dels principis lingüístics per evitar interpretacions errònies o malentesos. Aquest estudi ofereix una visió general de l'ampli camp de la lingüística forense i destaca les seves diverses contribucions al sistema de justícia penal. Ofereix un resum de casos legals destacats i analitza la intersecció entre la lingüística forense i la lingüística aplicada. Per tant, aquest treball de fi de grau pretén demostrar com aquest àmbit de la lingüística pot tenir un paper clau a l'hora de resoldre casos judicials. Per desenvolupar aquesta anàlisi, aquesta investigació farà referència a múltiples lingüistes forenses distingits i la seva implicació en la resolució de casos legals i penals.

Paraules Clau: lingüística forense, atribució d'autoria, fonètica forense, casos legals.

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1. Introduction

The field of forensic linguistics has experienced significant growth over the past few decades within a current-day framework of use that encompasses various aspects of language use. These include analysing dialects, examining legal language in court cases, resolving disputes about trademark and authorship and more. (Coulthard & Johnson, 2007). According to the *Encyclopedia of Forensic Sciences* (2013),

> Forensic linguistics is a branch of applied linguistics related to the law and legal processes. The discipline subsumes a wide variety of research and casework, and it is suggested by Coulthard, Grant & Kredens (2010, p.529) that forensic linguistics is the application of linguistics to three main areas, 'written legal texts, spoken legal practices, and the provision of evidence for criminal and civil investigations and courtrooms disputes. (Perkins & Grant, 2013, p.174)

In forensic linguistics, many varieties of language evidence might be examined. These include written documentation such as emails, text messages, or letters as well as recorded conversations, such as phone calls, voicemails, or interviews. Linguistic features like dialect, syntax, grammar, lexicon, and register are also analysed in order to try to associate linguistic patterns that can lead to a connection with a suspect.

Therefore, the objective of this project is to explore the possible applications of forensic linguistics in real-life criminal cases, and in consequence to demonstrate that this area of linguistics can play a key role in solving them. The first part of the project will describe the history of forensic linguistics, specifically in the United Kingdom focusing on the study of the case of Timothy John Evans. Secondly, there will be a definition of the three main areas of forensic linguistics: the language of the law, the language of the court and language in evidence. Finally, the third part will provide three examples in which forensic linguistics has been an important factor in solving real crimes through analysis by the actual linguists who contributed towards solving them.

1.1 History of Forensic Linguistics and the Case of Timothy John Evans

Forensic linguistics emerged as a recognised field of study in the late 1960s and early 1970s. One of the pioneering figures in forensic linguistics was Professor Jan Svartvik, who is said to be the first to use the term 'forensic linguistics', in his book, *The Evans Statements: A Case for Forensic Linguistics,* published in 1968. In this book, Svartvik analyses statements made by Timothy John Evans that were reported to police officers at Notting Hill Police Station in London in 1949. This was a notable criminal case in the United Kingdom, since Evans was wrongfully accused of murdering his wife, Beryl, and his fourteen months old daughter, Geraldine.

Even though during the trial Evans allegedly confessed to the crime, it is believed that he did it because he was emotionally and physically exhausted due to the stress caused by the death of his family, and the fact that he also feared that he would be a victim of police brutality if he did not confess. Moreover, the police were hindered by insufficient forensic expertise which led to key evidence being neglected. However, the police denied these statements and argued that Evans had voluntarily confessed. Therefore, it was left to the jury to decide who was telling the truth and eventually Evans was found guilty and sentenced to death.

The statements made by Evans were questioned by Ludovic Kennedy, a well-known journalist at the time. Kennedy wrote the book *Ten Rillington Place* (1961) in which in reference to Evans' confessions, he claimed that "both these 'confessions' are demonstrably false" as the vocabulary and wording by Evans were not consistent. In consequence, Professor Jan Startvik was appointed to analyse them and he subsequently concluded that there seemed to be two different methods of communication produced by Evans. The first emulated a colloquial manner, whilst the second was a formal written register with a number of indications of police institutional language in it. Therefore, along with other evidence, it was determined that Evans could have not dictated the statements that were attributed to him.

Finally, three years after Evans' execution, John Christie confessed that he was the one who had murdered Beryl and Geraldine. Christie was Evans' neighbour and landlord and he also participated as a prosecution witness in Evans' trial. Later on, it was discovered that he

had also murdered several other women, including his own wife. After this discovery, Evans was posthumously pardoned in 1966 and, in addition, this case contributed to the abolition of capital punishment in the United Kingdom. Accordingly, Evans' case is cited as the leading case in the development of forensic linguistics, as it highlighted the importance of analysing language in legal contexts and its potential impact on the outcome of criminal trials.

2. Areas of Forensic Linguistics

In the scope of Forensic Linguistics, there exist three main areas of application (Gibbons & Turell, 2008) where language and law intersect: the written language of the law, especially the language of legislation; the language of court proceedings and police questioning; and finally, language in evidence, which can be subdivided into authorship identification or attribution and forensic phonetics.

2.1 Language of the Law

Language of the law is an area of forensic linguistics that focuses on analysing the language utilised in legal contexts. This type of language is characterised for being complex and laborious to comprehend by non-legal experts. That is why forensic linguists who specialise in this area are able to provide important insights into legal language.

As stated by Peter Tiersma (2006, p. 7), legal language is the "distinct manner of speaking and writing that has been developed by just about any legal system throughout the world". Nevertheless, legal language is characteristic due to its complexity and diverse features which distinguish it from everyday language. Tiersma (2006) claims that legal languages are products of the history of the nation or state in which they are used, as well as the peculiar developments of the legal system in question. That is why it is important to acknowledge the history of the English language in order to understand the current legal lexicon.

The influence of foreign language has contributed to the complexity of legal language. The origins of English can be traced back to the Germanic Settlement in 449 A.D., where the Angles, Jutes and Saxons, who spoke closely related languages, simplified their languages to

communicate with each other, giving birth to Old English. Many phrases and words from this period have persisted in legal language, such as "to have and to hold and "rest, residue and reminder".

Furthermore, the Christianization of the Anglo-Saxons and the Viking invasion also had a significant impact on the English lexicon. Christianity brought written codes and law and the creation of legal documents, leading to the inclusion of religious, education, and everyday terms in English. The Vikings, on the other hand, introduced the Old Norse word "lǫg", meaning established laws, which eventually gave rise to the English word "law".

The most influential event in the linguistic development of English was the Norman conquest in 1066. The Normans, who were originally Scandinavians, settled in France and brought Norman French to England. As a result, English became the third language in its own country, while Latin and French became the dominant languages. Latin, associated with the church and scholarship, influenced legal language through surviving legal sayings like "minimin non curat lex" (the law does not take account of trifling matters) and "expression est exclusio alterius" (the expression of one thing is the exclusion of the other). French, being the language of the ruling class, contributed numerous words related to government, administration, and law in Modern English.

Therefore, the complex nature of legal language can be attributed to its historical development and the influences it has received from various foreign languages over time. The evolution of English through Germanic, Christian, Viking, and Norman influences has shaped the vocabulary and terminology used in legal contexts today.

Features of Legal Language

Legal language is distinct from everyday speech and writing, as it is known for its complexity and obscurity. As Bhatia (1993, p. 101) claims,

"Legislative writing has acquired a certain degree of notoriety rarely equalled by any other variety of English. It has long been criticised for its obscure expressions and circumlocutions, long-winded involved constructions and tortuous syntax, apparently meaningless repetitions and archaisms".

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As such legal English can be defined as a variety of English (Tiersma, 2006) due to its complexity compared to ordinary language and it is characterised by long and complex constructions and archaic expressions. To begin with, while pronunciation and morphology are not significantly different, certain words and phrases such as *defendant* can be pronounced differently, /dɪˈfen.daent/ or /dɪˈfen.dənt/ (Tiersma, 2006, p. 13), to indicate affiliation with the legal profession. Besides, Crystal and Davy (1969) observe that legal documents feature lengthy sentences with intricate grammar, reflecting the multitude of conditions and requirements necessary for legal actions.

The lexicon of legal language is filled with technical vocabulary and archaism, outdated words and expressions. These archaic terms give weight and authority to the language, emphasizing formality. Examples include hereby in the structure "we hereby state that…", *herein* as in "the agreement is herein contained", (Crystal & Davy, 1969 p. 207) *witnesseth*, which is used in legal contracts (Tiermsa, 1999) or using the pronoun *'ye'*, which is used in legal contexts in order to get attention "hear ye, hear ye, hear ye." Therefore, using such language helps avoid potential ambiguity and varying interpretations when dealing with laws and instructions. (Gibbons, 2003, p.41)

Nevertheless, as a result of the use of this complex and outdated language, it can make it inaccessible to those unfamiliar with the legal system, leading to confusion and misunderstandings. Thus, forensic linguists play a vital role in ensuring effective comprehension of the legal system by bridging the gap between legal language and everyday understanding.

2.2 Language of the Court

Another area of study in forensic linguistics is the language of the court which involves a detailed analysis of the linguistic features, communication strategies, and discourse patterns that are characteristic of legal settings. This includes examining the use of specific terminology, the persuasive techniques employed by professionals, and the ways language is used to establish credibility and authority in court. Therefore, forensic linguists in this domain analyse the language used by judges, witnesses, attorneys, and jurors. Some scenarios where this type

of language can be found are trials, police and prosecutor interviews, cross-examination, presentation of evidence, questionings, confessions, among others.

Moreover, the choice of words used in a courtroom can create a semantic distinction between the prosecution and defence versions of the same events, and the juxtaposition of narrative accounts occurs through challenging questioning that implies additional meaning. (Coulthard et al, 2017). That is, forensic linguists also explore how language can be interpreted and misinterpreted. They investigate potential ambiguities in the courtroom since language can be a key factor that can shape the perception of guilt or innocence.

Nevertheless, it is important to acknowledge that the courtroom setting introduces a complex framework for interaction, where the jury, as a silent but attentive audience, plays a pivotal role in shaping the structure of the conversational turns. The jury members are identified within the discourse through the use of deictic references (such as 'you').

Furthermore, specific questioning techniques are employed especially in cross-examination. Biber et al (2002, p. 249) provide a categorization of five types of questions: 'wh-questions' which elicit missing information; 'yes/no questions' to ask whether a proposition is true or false; 'Alternative questions', to ask which of two or more alternatives is the case; Tag questions, which 'seek confirmation of the statement the speaker has just uttered'; and finally Declarative questions (Quirk et al., 1985), which typically express statements but which serve an eliciting speech-act function.

To summarise, the language of the court is a vital area of study within forensic linguistics as it provides valuable insights into the intricacies and impact of language within the legal system.

2.3 Language in Evidence

Finally, in forensic linguistics, language can also be used as evidence to help solve criminal or legal cases. This area involves analysing different aspects of language such as written or spoken communication, syntax, word choice and style with the aim of determining the author or speaker of a text, identifying patterns of communication, or providing important

context in legal cases. Some forensic domains which are included in this area of forensic linguistics are authorship attribution and forensic phonetics.

2.3.1 Authorship Attribution

Authorship attribution is the process in which linguists set out to identify the author(s) of disputed, anonymous, or questioned texts. (Coulthard et al., 2017). There are different types of texts that can be analysed in authorship attribution. These include text messages sent by a person pretending to be someone else, blackmail letters or texts, falsified suicide notes, threatening texts, and ransom notes, among others.

Authorship attribution aims to examine the language used in a piece of writing in order to determine who the author is. However, as Coulthard et al., (2017) detail, in this process the forensic linguist only analyses a select number of texts from a very small number of candidate authors and requires the disputed texts as well as previously known writings from computers or mobile phones from all potential authors. Once this evidence has been collected, the forensic linguist compares different linguistic aspects such as word choice, sentence structure, punctuation, and style features in both the disputed texts and the known texts in order to determine whether they have been written by the same person. This process of analysis is later exemplified by Coulthard's analysis of Jenny Nicholl's case.

However, there have been different approaches as to what is the most effective methodology to analyse cases regarding authorship. The process described above, commonly known as the descriptive linguistic approach, is based on expert identification and selection of potential distinctive vocabulary, but some linguists indicate that there is a chance that confirmation bias may influence the selection of features that align with the analyst's expectations about the case. Additionally, this method is descriptive rather than statistical, therefore creating a quantified approach could provide stronger evidence for the reliability of the findings and the validity of the methods. (Grant, 2013). This process of analysis will later be exemplified by Grant's analysis of the Amanda Birks' case.

Thus, different methodologies appear to be used in authorship attribution analysis. The first process described is used in Jenny Nicholl's case, analysed by Malcolm Coulthard.

Coulthard is best known for his work on the analysis of spoken and written discourse and his involvement with forensic applications of linguistics. He has acted as an expert witness in forensic linguistics and has prepared reports for numerous civil and criminal cases. Additionally, he is considered the first professor of forensic linguistics in the world, and the founding editor of key forensic linguistic journals.

Tim Grant, another experienced forensic linguist, deploys a different methodology when analysing cases. His main research focuses on short form messages such as SMS text messages, Twitter posts and Internet Relay Chat. He has provided evidence for both prosecution and defence in various criminal and civil cases. He is now the director of the Aston Institute for Forensic Linguistics.

Style Markers

The methods utilised by forensic linguistics in order to analyse these disputed texts and get conclusions regarding authorship that have been effectively and frequently employed in forensic casework are mainly *stylistic*. The phrase 'forensic stylistics' is typically associated with the American linguist Gerald McMenamin, and he defines it as:

> Forensic stylistics makes use of stylistic analysis to reach a conclusion and opinion related to the authorship of a questioned writing within the context of litigation. Stylistics is the scientific study of patterns of variation in written language. The object of study is the language of a single individual (idiolect), resulting in a description of his or her identifying linguistic characteristics. (McMenamin, 2002, p.163)

Moreover, according to McMenamin (2002) an author's language choices reflect their individual abilities and their personal combination of linguistic knowledge, cognitive associations, and external influences. This unique combination of factors is referred to as their *idiolect*. Essentially, an individual's language choices can be explained by their distinct social and communicative experiences, such as where they have lived; their reading or music preferences; their education; their employment history or social interactions. As a consequence, each person's social background is unique and is reflected in their language choices and preferences, which can be later identified through the analysis of style markers. In short, these

style markers are present at all levels of language and can be used as a way to identify an author's unique writing style.

McMenamin (2002) provides an extensive demonstration of forensic analysis by a thorough study of the linguistic evidence in the well-known JonBenét Ramsey murder case in 1996. This case involved the disappearance and subsequent discovery of the dead body of the six-year-old JonBenét in the basement of her family house, along with a three-page, 370-word, ransom note. McMenamin was asked to compare the ransom note with a set of the parents' writings as both were considered murder suspects. Through an analysis of the ransom note. McMenamin was able to identify idiosyncratic spellings, word divisions, and methods of writing sums of money which he believed were likely to be evidence.

After identifying qualitative differences between the ransom note and the pre-crime writing of both the father and mother in the JonBenét Ramsey murder case, McMenamin decided to approach the question quantitatively. He compared the style features of the ransom note with a corpus of 338 texts from the American Writing Project, isolating six variables for analysis that occurred frequently in the comparison corpus and were different between Mrs. Ramsey and the ransom note. By calculating the likelihood of all six variables co-occurring in the same text by chance (which was less than one in 10,000), McMenamin argued that both qualitative and quantitative measures supported the opinion that neither Mr. nor Mrs. Ramsey had written the ransom note.

Consistency and Distinctiveness

Alongside the importance of style markers in authorship attribution are 'consistency' and 'distinctiveness'. Grant (2013, p.473), comparative authorship depends on two assumptions:

> The first assumption is that there is a sufficient degree of *consistency of style* within relevant texts by an individual author. The second assumption is that this consistency of style inherent in an author's writings is *sufficiently distinctive* to discriminate the one author from other relevant authors [our emphasis].

According to Grant (2013), both of these assumptions need further explanation. On the one hand, the first assumption that there is "a sufficient degree of consistency of style within relevant texts" means that it is not necessary to identify language features of an author that are

completely consistent. Nonetheless, it must be acknowledged that the more consistency in any comparison corpus, the greater weight of evidence there will be for attribution. Moreover, in order to identify consistency within relevant texts, a linguistically relevant comparison corpus must be created, taking into account the genre and other sources of linguistic variation. For example, it is necessary to consider the accommodation effects between different message recipients and possible modes of production, such as using an older or newer phone due to the differences in the keyboard.

On the other hand, the second assumption presents different considerations. 'Distinctiveness' refers to "the extent to which the styles of two or more authors are similar or different" (Coulthard et al., 2017). Grant (2013) states that there may be varying degrees of distinctiveness between pairs of individuals or within smaller or larger groups. Some pairs of authors may produce writings that are easily distinguishable, while others may generally produce texts that are stylistically similar. In the first case, the comparative authorship analysis will be easier, meanwhile, in the second case, it may be impossible to distinguish between the authors' writings. Therefore, it might only be necessary to compare one author with other relevant authors in this case.

Style markers and the identification of linguistic consistency and distinctiveness will be later exemplified and analysed by the murder cases of Jenny Nicholl and Amanda Birks in which the forensic linguistic analysis of disputed text messages played an important role. Both cases employ different strategies in which these two factors are used.

2.3.2 Forensic Phonetics

Another area related to language as evidence is forensic phonetics, which refers to the application of phonetics to different legal situations involving speech. The main function of forensic phonetics is to determine the identity of a speaker and it is used for instance in legal cases when a recorded conversation or speech is used as evidence. One of the most experienced experts in the field of forensic phonetics is Peter French. He has worked in this area for over 30 years and has made significant contributions to the field. In addition, he has played a crucial role in establishing quality regulations and standards for the profession. Notably, he has served as the Chair for 15 years and later as the President for 15 years of the International Association

for Forensic Phonetics and Acoustics. Prof. French's expertise has been sought in numerous cases encompassing various aspects of forensic speech and audio analysis. He has provided evidence for the UK Crown Courts and the Court of Criminal Appeal, testifying in thousands of cases.

According to French and Baldwin (1990), there exist many applications for forensic phonetics, but these can be broadly divided into two main categories with several categories. On the one hand, the first category is referred to as the "investigative" or "intelligence". It involves situations where the police or investigators are conducting an investigation without any specific suspects in mind. In these cases, they may have a speech sample, such as a recorded phone call or cassette, from an unknown speaker. Phonetic analysis can provide valuable information about the speaker's background.

Moreover, when investigating an unknown speaker, the first thing investigators may want to know is where they come from. Even though identifying accents is a difficult task, experienced phoneticians such as Stanley Ellis and Jack Windsor Lewis of the University of Leeds, as well as French, have successfully carried out accent location exercises that have proved invaluable in the cases they were consulted on.

One case which French and Baldwin (1990, p. 66) relate as an example of the "investigative" category is one that involved a cassette tape that was sent to police shortly after they had arrested two suspects for causing explosions. The person on the tape claimed to have been involved in a different aspect of the crime than the arrested men and tried to convince the police that the men were innocent. The speaker's accent was a mixture of Scottish and North-East English, but upon closer examination, it became clear that the speaker was intentionally putting on an accent to conceal their real one. For instance, the speaker produced differently the word 'call' three times in the same sentence: the first time with an open-back vowel, the second time with an open and central vowel and the third time with a raised-open vowel. French explains that it was very unlikely that this was the speaker's natural accent. So, with these different features, he identified that the speaker was most likely from South Wales. This information helped the police pursue their investigation, and a conviction was eventually secured.

On the other hand, the second category French and Baldwin (1990, p. 64) detail is the "evidential". This area is useful to involve cases where investigators have narrowed their focus

to specific targets, usually in the form of suspects. In addition, it is subdivided into three different categories: disputed utterances, editing and speaker identification.

To begin with, disputed utterances usually involve a dispute over the accuracy of a transcript, specifically the details of what someone said or is claimed to have said in a conversation. The task of the phonetician in this category is to carefully compare the disputed utterance with the known utterances of each participant in the conversation and provide an opinion as to which, if any, of them are likely to have made that utterance. For example, the prosecution may try to attribute a particular incriminating statement to the defendant, while the defence may try to attribute it to another person.

A case that French and Baldwin (1990) explain is of a doctor of Greek origin, who spoke English with a strong accent. He was recorded on tape giving controlled drugs to a man posing as a drug addict. The doctor was heard saying "you can/can't inject those things" while giving the prescription. The prosecution argued that the word "can" was used irresponsibly by the doctor in recommending that the patient grind up tablets for injection. The defence argued that the word used was "can't," and that the doctor was warning the patient against a dangerous practice. The defence requested an examination of the disputed utterance and a sample of the conversation involving the doctor. The examiner found that the doctor typically dropped the final "t" in "can't," leaving "can" and "can't" with the same structure. The spectrographic examination showed that the vowel in the disputed word fell clearly within the range associated with his "can't" vowel and outside those associated with his "can" vowel. On the basis of these findings, the examiner supported the defence's case.

The second category French and Baldwin (1990) describe is editing, which can be further divided into more specific subcategories. However, they all involve the allegation that modifications were made to recorded samples. Moreover, there are digital recording techniques that can edit in such a way that it is impossible to detect it. Nevertheless, most individuals who might want to modify recordings for deceptive purposes lack the financial and technical means to execute them. Therefore, cases where editing has taken place are limited.

Finally, the last category French and Baldwin (1990) state is speaker identification which involves "the comparison of samples of speech, and these are almost always tape-recorded.". One context in which speaker identification can take place is when the police have a recording of a criminal's voice where they confess or commit a crime, but they do not have any suspects.

In such cases, they seek the help of a forensic phonetician in order to analyse the speech and gather information about the speaker. Forensics uses their expertise to gather as much information as possible about the speaker. This includes characteristics such as age, sex, ethnicity, geographical location and native language. Examples of situations where speaker profiling might be used include obscene phone calls, ransom demands, bomb threats, extortion and audio recordings of attacks or murders. (Coulthard et al, 2017). An example of speaker identification is the Yorkshire Ripper Case which will be analysed later in this paper.

3. Analysis of cases

3.1 Authorship Attribution: The Jenny Nicholl Case

Forensic Linguist Professor Malcolm Coulthard and his colleagues at the Centre for Forensic Linguistics at Aston University in Birmingham (now known as the Aston Institute for Forensic Linguistics) are well-known for their work in investigative forensic linguistics in the United Kingdom. They often assist the police in cases where authorship is in dispute. One of the cases Coulthard helped investigate was the disappearance of Jenny Nicholl.

Jenny Nicholl was a 19-year-old who disappeared on 30th June 2005 in the Richmond area, North Yorkshire, England. That day, Nicholl told her family that she was going to spend the night with her friends, which was not unusual for her, and took items with her that indicated that she was planning a camping trip. She left her house at 6 p.m. and this was the last time that she was seen. Her parents reported her missing on the 4th of July 2005 after they were unable to contact her for several days.

Nine days after Nicholl's disappearance, the North Yorkshire Police questioned David Hodgson, who had been dating Nicholl since she was 14. Hodgson was 45 years old, married, and had two daughters that attended the same school as Nicholl. During his first police interview, Hodgson denied having an affair with Nicholl or any involvement in her disappearance, but the police were not convinced. However, he subsequently changed his story, claiming that their relationship did not turn sexual until Nicholl turned 16, which is the legal age of consent in England, and that they had only been intimate five times. In the days following Nicholl's disappearance, two of her friends, Jennifer Whelan and Nicola Gosnold,

and her father, Brian Nicholl, received different text messages from her which led her family and the police to believe she was alive and well. The texts revealed to have been sent in Carlisle, Cumbria and Jedburgh in the Scottish Borders were the following:

Texts sent from Jenny's phone.

Sent to Jenny's friend Jennifer Whelan on July 9, 2005

"hi jen tell jak i am ok know ever 1s gona b mad tell them i am sorry.living in scotland wiv my boyfriend.shitting meself dads gona kill me mum dont give a shite.hope nik didnt grass me up.keeping phone of.tell dad car jumps out of gear and stalls put it back in auction.tell him i am sorry"

Sent to Jenny's friend Nicola Gosnold at 12.16pm on July 9, 2005

"Thought u wer grassing me up.mite b in trub wiv me dad told mum i was lving didnt giv a shit.been2 kessick camping was great.ave2 go cya"

Sent to Brian Nicholl, Jenny's father on July 14, 2005

"Y do u h8 me i know mum does.told her i was goin.i aint cumin back and the pigs wont find me.i am happy living up here.every1 h8s me in rich only m8 i got is jak.txt u couple wks tell pigs i am nearly 20 aint cumin back they can shite off"

"She got me in this shit its her fault not mine get blame 4evrything.i am sorry ok just had 2 lve shes a bitch no food in and always searching me room eating me sweets.ave2 go ok i am very sorry x"

The authenticity of these texts was put into doubt by the police, and the inquiry was turned into a murder investigation. In late July, Hodgson was found in a hut near Hudswell, having taken an overdose of pills and wine. In the following police interviews, he admitted that he and Nicholl had been lovers, but their relationship had ended a year ago. During the investigation, the police discovered that Nicholl had also been seeing Hodgson's older brother, Robert, in the weeks leading up to her disappearance. It is believed that Robert was unaware

of the relationship between Nicholl and his brother. In May 2007, David Hodgson was charged with Nicholl's murder and remanded in custody until his trial in early 2008.

In January 2008, the case was taken to court where David Hodgson again denied that he had seen and taken Nicholl on 30 June 2005. Nevertheless, DNA evidence and the discovery of Nicholl's belongings in Hodgson's hut contradicted his denial. The police believed that Hodgson murdered Nicholl out of jealousy towards his brother's relationship with her.

Moreover, during the trial, the prosecution argued that the text messages sent after Nicholl's disappearance were not in her usual style. Furthermore, they also provided evidence that Hodgson had hired a car, and the dates and distances matched the locations where the messages were sent from Nicholl's phone. In February 2008, Hodgson was found guilty of Nicholl's murder.

As has been stated before, police had doubts about the authenticity of the messages sent by Jenny Nicholl. However, they needed evidence to prove this statement in court. To accomplish this, they sought the help of Professor Malcolm Coulthard, who collaborated with Detective Chief Superintendent Sue Cross and her team so they could express their opinion on whether the texts had been written by Nicholl or Hodgson. In order to do this, the police provided Professor Coulthard with transcripts of the three messages sent in July, plus over 100 texts sent by the suspect and 11 texts sent by Jenny before her disappearance as samples for comparison.

Firstly, Coulthard conducted a thorough examination of two sets of existing messages and distinguished nine style markers through a qualitative, descriptive, and stylistic analysis. These style markers (Table 1) were used to differentiate between the texting patterns of Nicholl and Hodgson, and they reflect the linguistic variations in the author's choices of words and expressions. The consistent use of these choices in their respective emails resulted in two distinct text messaging styles.

Table 1.

Variable	Nicholl's preference	Hodgson's preference
I am	im	i am
I have	ive	ave
My/myself	my/myself	me/meself
off	off	of
to	[word]2[word]	[word]2 [word]
See you	cu	cya
phone	fone	phone
shit	shit	shite
Am not	'm not	aint

Table 1. A comparison of Jenny Nicholl's and David Hodgson's stylistic choices (Adaptation from An Introduction to Forensic Linguistics, Malcolm Coulthard, Alison Johnson and David Wright, p. 159)

Secondly, after determining that Nicholl and Hodgson had distinctive and consistent styles, Coulthard focused on examining the four disputed text messages. In an interview with Joe Willis, a journalist for the newspaper *The Northern Echo*, Coulthard discussed the disputed messages and stated "The interesting thing about text messages is that they're very short, but because it's a new way of working, people partially make it up themselves. This makes text messages much more distinctive than other types of writing". The following are the disputed text messages which have been made available and analysed with a focus on the different style markers stated in Table 1:

1. Sent to Jenny's friend Jennifer Whelan on July 9, 2005

"hi jen tell jak **i am** ok know ever 1s gona b mad tell them **i am** sorry.living in scotland wiv my boyfriend.shitting **meself** dads gona kill me mum dont give a **shite**.hope nik didnt grass me up.keeping **phone** of.tell dad car jumps out of gear and stalls put it back in auction.tell him **i am** sorry"

2. Sent to Jenny's friend Nicola Gosnold at 12.16pm on July 9, 2005

"Thought u wer grassing **me** up.mite b in trub wiv **me** dad told mum i was lving didnt giv a shit.**been2 kessick** camping was great.**ave2** go **cya**"

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3. Sent to Brian Nicholl, Jenny's father on July 14, 2005

"Y do u h8 me i know mum does.told her i was goin.i **aint** cumin back and the pigs wont find me**.i am** happy living up here.every1 h8s me in rich only m8 i got is jak.txt u couple wks tell pigs **i am** nearly 20 **aint** cumin back they can **shite** off"

"She got me in this shit its her fault not mine get blame 4evrything.**i am** sorry ok just **had 2 lve** shes a bitch no food in and always searching **me** room eating me sweets.**ave2** go ok i am very sorry x"

Therefore, Coulthard's aim was to determine whether any of the nine style markers displayed consistent and distinctive patterns in the pre-crime known messages of Nicholl and Hodgson in comparison with the disputed text messages above. Some instances used by Coulthard were the variable 'I am' which was written as 'i am' in the disputed text, which is a consistency in Hodgson's writing style. The lack of a space after using '2' for 'to', is Nicholl's preference. Similarly, 'my/myself' was represented as 'me/meself' in the disputed text, which was also a unique feature of Hodgson's style. Thus, as can be seen in Table 2, most of Nicholl's variables do not match with the disputed text messages, which instead are more consistent with David Hodgson's.

Table 2.

JENNY NICHOLL HISTORIC MESSAGES		SUSPECT TEXT MESSAGES
Yeah shud b gud I just **have2get** **my** finga out do anotha tape wil do it on sun.will seems **keen2x**		"Thought u wer grassing me up.mite b in trub wiv **me** dad told mum i was lving didnt giv a shit.**been2 kessick** camping was great.**ave2** go **cya**"
Only just turned **my** **fone** havnt lied bout anything.no it doesnt look good but ur obviously ist as judgmental that the rest.**cu** wem I **cu**&i hope its not soon	**NICHOLL** / **HODGSON**	"hi jen tell jak **i am** ok know ever 1s gona b mad tell them **i am** sorry.living in scotland wiv **my** boyfriend.shitting **meself** dads gona kill me mum dont give a **shite**.hope nik didnt grass me up.keeping **phone** of.tell dad car jumps out of gear and stalls put it back in auction.tell him **i am** sorry"
Im tierd of defending **myself** theres no point. Bye Sum black+pink k swiss shoes and all the other **shit** like socks. We r **going2the** Indian. Only16quid. What u doin x		"Y do u h8 me i know mum does.told her i was goin.i **aint** cumin back and the pigs wont find me.**i am** happy living up here.every1 h8s me in rich only m8 i got is jak.txt u couple wks tell pigs **i am** nearly 20 **aint** cumin back they can **shite** off"
No **im** out wiy aik sorry it took me so long **ive** had **fone off** coz havnt got much battery **Shit** is it. Fuck **icant2day ive** already **booked2go** bowling.cant really pull out wil **go2shop** and get her sumet soon. thanx4tdlin me x		"She got me in this shit its her fault not mine get blame 4evrything.**i am** sorry ok just **had 2 lve** shes a bitch no food in and always searching **me** room eating me sweets.**ave2** go ok i am very sorry x"

Table 2. A comparison of the different style markers used by Jenny Nicholls and the disputed text messages.

Based on this analysis, Coulthard concluded that Jenny Nicholl was unlikely to have written the messages. He argued that the linguistic features identified in the disputed texts and Hodgson's known messages were consistent enough to determine that the texts were sent by him. During the trial, he stressed that Hodgson was among a group of potential authors, and that the linguistic evidence could not provide a conclusive identification. Ultimately, this evidence of the consistencies in style and distinctive features played a crucial role in persuading the jury to convict Hodgson for the murder of Jenny Nicholl.

3.2 Authorship Attribution: The Amanda Birks Case

Another example of a case resolved with the help of authorship attribution is the Amanda Birks case. This investigation was developed by Tim Grant (2013), in which he disputes the question of whether determining consistency and distinctiveness alone are enough for analysing linguistic authorship. Therefore, with the Birks case, Grant expanded the descriptive stylistic methodology applied by Coulthard in the Jenny Nicholl case and combined it with statistical approaches.

On the evening of Sunday, January 17, 2009, the fire brigade responded to a call at the home of Christopher and Amanda Birks in Stoke-on-Trent, United Kingdom. Christopher Birks alerted the firefighters that his wife was trapped in the attic bedroom, but unfortunately, only Amanda's severely burned body was found. Later, it was discovered that Amanda had been in bed when the fire started and had not shown any signs of waking up or attempting to escape.

Forensic analysis revealed that fibres found on Amanda's body matched her daytime clothing, and toxicology reports indicated a lack of carbon monoxide in her lungs. These findings suggested that Amanda had not changed into her nightclothes before going to bed and that she had not been breathing when she was burned, thus ruling out inhalation of fire fumes as a cause of death. However, due to the extensive damage caused by the fire, the exact cause of death could not be determined.

Furthermore, Christopher Birks claimed that Amanda had been at home for most of the day on that day. An employee who visited the house in the morning witnessed Christopher and Amanda together, and during Christopher's absence in the afternoon, several SMS text messages were sent from Amanda's phone. These messages, sent to Christopher, employees, and other family members, indicate that Amanda had been going about her usual activities at home. These messages also mentioned important details about her relationship with Christopher and her plan to go to bed early in the attic bedroom on the night of the incident. It is important to note that Amanda's phone was destroyed in the fire, thus the messages were retrieved from the recipient's phones.

Christopher Birks' statement about the incident was contradicted by the surveillance evidence from the home burglar alarm. Expert technical examination of the alarm showed that it had been fully activated during the evening of 17 January, whilst also showing that it had not recorded Amanda's movements around the house.

Ultimately, Christopher Birks was accused of murdering his wife and endangering the lives of his children and firefighters based on a compilation of evidence. This evidence included the presence of textile fibres on Amanda's body, the lack of carbon monoxide in her lungs, records from the burglar alarm, and a forensic analysis of the text messages to determine the authorship.

In Tim Grant's article "TXT 4N6: Method, Consistency, and Distinctiveness in the Analysis of SMS Text Messages" (2013) he describes the forensic linguistic analysis of the case. The Staffordshire Police provided Grant with 204 text messages from Amanda Birks' phone. They suspected that the messages sent after midday on January 17 were not sent by her. Thus, Grant excluded these messages, leaving out a set of 165 messages that were considered Amanda's known writings. Additionally, Grant received text messages from Christopher Birks' phone for comparison. Therefore, Grant's objective was to determine whether the writing style in the disputed SMS text messages resembled the known writings of Amanda or Christopher.

Firstly, in order to analyse the entire set of 407 text messages, Grant used the linguistics software *Wordsmith Tools* (Scott, 2012) to identify word forms and spelling variants, as well as other features specific to text messaging such as abbreviations, letter/ number substitutions, spacing between words, etc. In his first analysis, Grant gathered 154 style markers for analysis.

To maintain consistency, Grant eliminated any feature that appeared less than ten times across all messages. Additionally, he only kept the features that were used by both authors at least twice. After these steps, Grant was able to identify 18 features of style with "discriminative power" for analysis: ten for Amanda and eight for Christopher, depicted in the table 3 below:

Table 3.

Table 1: Frequency distribution of elicited features

	Feature	# in CB texts	# in AB texts	Total	% in AB texts	% in CB texts
Features characteristic of AB's texting	"ad" for "had"	0	13	13	100%	0%
	"dont" for "don't"	0	9	9	100%	0%
	"t" for "the"	1	15	16	93.8%	6.3%
	"bak" for "back"	1	10	11	90.9%	9.1%
	"av" for "have"	1	9	10	90.0%	10.0%
	"wud" for "would"	2	9	11	81.8%	18.2%
	"w" for "with"	3	10	13	76.9%	23.1%
	"y" for "yes"	2	6	8	75.0%	25.0%
	"wil" for "will"	4	9	13	69.2%	30.8%
	"wen" for "when"	4	9	13	69.2%	30.8%
Features characteristic of CB's texting	"dnt" for "don't"	8	0	8	0%	100%
	"jst" for "just"	12	0	12	0%	100%
	"wiv for "with"	15	0	15	0%	100%
	4 for "for" with no trailing space	35	0	35	0%	100%
	2 for "to" with no trailing space	58	0	58	0%	100%
	Use of comma	87	5	92	5.4%	94.6%
	"4get" for "forget"	15	1	16	6.3%	93.8%
	"thanx" for "thanks"	16	2	18	11.1%	88.9%

Table 3. Distinctiveness in style between Amanda and Christopher. (Grant, Tim. (2013). "Txt 4N6: Method, Consistency, and Distinctiveness in the Analysis of SMS Text Messages"

Secondly, Grant statistically measured the distinctiveness and style of Amanda and Christopher. To do this, Grant assigned a code of 'present' (1) or 'absent' (0) to each feature in every text message. Then, he compared pairs of messages based on their arrays of 1s and 0s using Jaccard's Similarity Coefficient, a statistic used for gauging the similarity and diversity of sample sets developed by Karl Gilbert in 1884. This analysis revealed that the messages known to be sent and written by Amanda were more similar to her other messages than they were to messages written and sent by Christopher, and vice versa. Therefore, these statistical

findings demonstrated that Amanda and Christopher had consistent and distinct text messaging styles.

Thirdly, after the analysis of the known texts, Grant focused on the disputed texts following the same methodology. He coded the disputed messages for the presence or absence of the 18 style markers. Jaccard's similarity coefficient was employed again to measure the similarity between the disputed texts and Amanda's known messages, as well as between the disputed texts and Christopher's known messages. Based on these comparisons, Grant concluded that the disputed messages showed significant dissimilarity to Amanda's known messages but no significant difference to Christopher's. Finally, to support his verdict, Grant also analysed each disputed message individually, pointing out different style markers that suggest a change in the authorship of the disputed texts.

Therefore, unlike the linguistic examination of the Nicholl-Hodgson case, the abilities of the forensic linguist to observe style markers did not influence the selection of them. Instead, features were determined from the data "according to a set of linguistically and statically justifiable criteria" (Grant, 2013, p.493). Ultimately, the method utilised in Amanda Birks' case narrows down the expert's considerations as it solely focuses on statistical consistency and distinctiveness. However, considering the vast array of linguistic variation, this limitation is appropriate in the context of authorship analysis as it allows the expert to present more reliable and credible evidence to the courts.

3.3 Forensic Phonetics: The Yorkshire Ripper Hoax Case

The Yorkshire Ripper case was a notorious series of murders that took place in the northern English cities of Leeds, Manchester, Bradford, and Huddersfield in the late 1975s and early 1980s. The killer, later identified as Peter Sutcliffe, gained infamy as the Yorkshire Ripper. He was responsible for the deaths of at least 13 women and the attempted murder of seven others. The first murders attributed to the Yorkshire Ripper occurred in 1975, but the majority of the crimes took place between the years 1977 and 1980. The murders were characterised by a high degree of violence and sadism as the killer mainly attacked with a variety of weapons including hammers, knives, and screwdrivers.

The victims were primarily young women who were working as prostitutes. The first two victims, Wilma McCann, and Emily Jackson were murdered in Chapeltown, an area known at the time for containing the primary red-light district in Leeds. This led the West Yorkshire Police to believe that they were searching for a "prostitute killer". However, it later became evident that the killer also targeted women in residential areas. As a result, crucial eyewitness accounts that did not align with the investigators' initial assumptions were disregarded, sparking allegations of negligence in handling key evidence.

The killer, Peter Sutcliffe, was a lorry driver from Bradford, West Yorkshire. Sutcliffe was interviewed nine times by police during their five-year investigation but was not identified as a suspect until 1980. In January 1981, he was arrested in Sheffield by South Yorkshire Police for driving with a false number plate and then transferred to the custody of West Yorkshire Police, where they questioned him about the murders. Sutcliffe confessed to the crimes by saying that he was on a "mission from God" to kill prostitutes. During his trial, he pleaded not guilty to the 13 murders but guilty to manslaughter on the grounds of diminished responsibility. However, the jury declared him guilty of murder and he received a sentence of life imprisonment. The trial judge recommended that he should serve a minimum of 30 years in jail before being eligible for parole.

In March 1984, Sutcliffe was moved from prison to Broadmoor Hospital as he was diagnosed with paranoid schizophrenia. He appealed in 2010 but the High Court rejected his appeal, confirming that he would spend the rest of his life in prison. In August 2016, he was declared mentally fit to return to prison, and he was transferred to HM Prison Frankland in County Durham. He passed away due to diabetes-related complications on 13 November 2020, while in prison custody at the age of 74.

Furthermore, the police investigation into the Yorkshire Ripper Case was one of the largest and most expensive in British history but it was plagued by errors made by the police as well as the misleading information provided by a hoaxer known as Wearside Jack. Wearside Jack was a nickname used by John Samuel Humble who falsely claimed to be the Yorkshire Ripper through a hoax audio recording and multiple letters sent between 1978 and 1979. Humble, speaking in a Wearside (a region in North-east England) accent, sent a recorded message on a cassette tape and three letters to authorities, taunting them for their inability to apprehend him. This led the investigation to be redirected away from the actual killer, Peter

Sutcliffe, who resided in West Yorkshire. Consequently, Sutcliffe's attacks on women continued for an additional eighteen months, as the false information hindered his potential arrest. Over 25 years later, a DNA match from a fragment on one of Humble's envelopes led to identification, and in 2006, he was sentenced to eight years in prison for perverting the course of justice.

Stanley Ellis and Jack Windsor Lewis were two English linguists who were both assigned to determine the authenticity of the cassette tape. Ellis was a scholar and broadcaster specialised in linguistics and English regional dialects. Notably, he made history as the first individual to provide expert testimony on speaker identification in an English court. Even after retiring from his university position, Ellis remained actively involved by lending his linguistic knowledge as an expert witness in various legal proceedings. Jack Windsor Lewis was a phonetician who gained recognition for his notable contributions to the field of English phonetics and the instruction of English pronunciation for non-native speakers. In a series of Case Reports, The Yorkshire Ripper enquiry: Part I and II, Ellis and Lewis describe their application of forensic linguistics in the case. In Part I, Ellis outlines his role in the operation in relation to the tape recording and in Part II, Lewis develops a number of points from his analyses of the letters.

Ellis begins his report saying that he was approached by the police for their investigation of the cassette tape. The police also sent him a duplicate recording of the audio of the following message:

> I'm Jack, I see you are still having no luck catching me. I have the greatest respect for you George, but, Lord, you are no nearer catching me now than four years ago when I started. I reckon your boys are letting you down George, they can't be much good can they? The only time they came near catching me was a few months back in Chapeltown when I was disturbed. Even then it was a uniformed copper, not a detective. I warned you in March that I'd strike again. Sorry it wasn't Bradford, I did promise you that but I couldn't get there. I'm not quite sure when I'll strike again but it will be definitely some time this year, maybe September or October, even sooner if I get the chance. I'm not sure where. Maybe Manchester, I like it then~, there's plenty of them knocking about. They never learn do they George. I bet you've warned them, but they never listen. At the rate I'm going I should be in the book of records, I think it's eleven up to now isn't

it? Well, I'll keep on going for quite a while yet. I can't see myself being nicked just yet. Even if you do get near, I'll probably top myself first. Well, it's been nice chatting to you, George. Yours, Jack the Ripper. No good looking for fingerprints, you should know by now it's clean as a whistle. See you soon. 'Bye. Hope you like the catchy tune at the end. Ha. Ha! [1]

Based on Ellis' previous dialect research, he believed that the speech revealed a significant influence from the north-eastern region of England, excluding Tyneside and North Yorkshire. He also concluded that the accent most likely originated from the Sunderland area, an industrial town located on the east coast of County Durham, positioned approximately midway between the rivers Tyne and Tees. Upon relaying this information to the police, Ellis was informed that the anonymous letter, claiming to be from the Ripper, was also received by the police and posted from the same area that Ellis had identified. Additionally, the cassette tape had been sent via post, and a document examiner had conducted forensic comparisons, confirming that the handwriting on the packaging matched that of the letters.
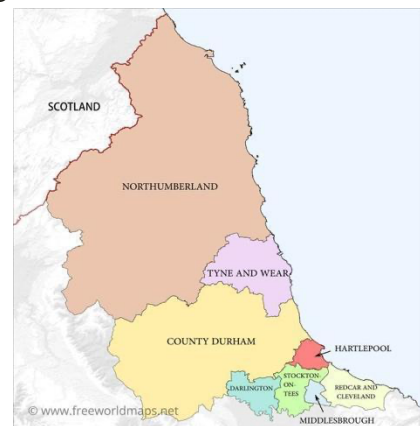

Image 1. Location of the counties of Northumberland, Tyne and Wear and County Durham

Once Ellis had defined an area in broad terms from which the speaker could be from, he decided to compile a collection of speech samples for comparison purposes. Firstly, he made a request for the recording of police officers who had grown up in different parts of Sunderland. Secondly, Ellis was able to utilise a series of recordings he had made as an oral English examiner for Cambridge University assessing 16-year-old students. These students were from various districts of Sunderland and during the exam, they had to describe their residential areas. Therefore, the recordings contained a significant number of basilect pronunciations, making them socio-linguistically comparable to those found in the 'Ripper' message. From these recordings, Ellis concluded that the speaker might be from a northern suburb in Sunderland.

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[1] The audio recording can be found at the following link: https://www.youtube.com/watch?v=wAle4cyp4qs – (The Telegraph, 2019)

This location was later reconfirmed with the comparison of the speech samples of the police and samples Ellis elicited when he visited the area.

Moreover, Ellis explained that his extensive experience in the Survey of English Dialects (a survey aimed to collect the full range of speech in England and Wales), had helped him gain a greater understanding of different regional patterns across England. The survey's data for the northern region of England had been published in the form of phonetic lists and later presented as maps, indicating vowel pronunciation in different areas. Therefore, Ellis took the first word spoken in the 'Ripper' tape "I" for examination. The pronunciation of the word was not in line with what would be heard in North Yorkshire or Tyneside, where a front open vowel [a:] would have been expected. Likewise, the presence of the voiceless consonant /j/ following the [ai] indicated a different pronunciation from what would be expected from a speaker in the south or north of County Durham. Besides, the vowel pronunciation in the word "strike" [straik], instead of the expected [ci] in the north or [rei] to the south, further supported this belief. Thus, all of these conclusions led the police to concentrate their investigation in the Sunderland area.

Subsequently, Ellis was invited by the West Yorkshire Police to spend some time in Sunderland so he could be more specific about the area by talking with the locals. During his time there, he determined that it was possible that the speaker did not reside in the Sunderland area anymore but retained contact with the area, a hypothesis later confirmed through postmarks. Ellis reported to the police that, in his opinion, the voice belonged to someone who had grown up in the Southwick or Castletown areas in Sunderland. However, he had reservations about the possibility of the individual still residing there.

Despite Ellis' argument that the 'Ripper' case did not match the 'Geordie' accent, men from Newcastle were being investigated across England. Accordingly, Windsor Lewis and Ellis discussed their involvement in the case. In this exchange, they acknowledged that the distinctive nature of the writing of the letters and the voice should have already been recognized by a friend, family member or colleague. As such, it appeared plausible to both that the person responsible for the writing and recording was merely a hoaxer and not linked to the murders in any way. Thereupon, Ellis and Lewis sent a letter to the police setting out their views "the point I am anxious to make is that the handwriting / voice enquiry should be seen as a separate single activity". But the police disregarded their opinion as it was the only lead they could follow.

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Eventually on the evening of Friday 2 January 1981, Peter Sutcliffe, the actual Yorkshire Ripper was caught, and the identity of the hoaxer was not identified until 2005. More than 25 years after the events, a senior officer of the West Yorkshire Police's Homicide and Major Enquiry Team (HMET), led by Detective Chief Chris Gregg, decided to revaluate the investigation. During this review, they found a small piece of the gummed seal from one of the envelopes and the DNA found in these matched with samples that the police had collected from a separate incident involving John Samuel Humble. In 2006, Humble was sentenced to eight years and prison for perverting the course of justice.

In summary, even though forensic phonetics did not actually identify the identity of the hoaxer it did indeed help. Ellis was accurate about the location of the hoaxer as Humble was certainly from the Castletown area of Sunderland. Thus, if the police had taken Ellis' views into account perhaps the actual killer, Sutcliffe, could have been identified earlier since previously he had been rejected as a suspect on the basis that he did not have a North-East accent.

4. Conclusions

In conclusion, this paper has analysed the different applications of forensic linguistics in real-life cases. Forensic linguistics incorporates linguistic principles and forensic analysis techniques in order to investigate and examine language-related evidence in legal cases. Through the analysis of various aspects of language, including syntax, semantics, pragmatics, and discourse analysis, forensic linguists aim to provide valuable insights and interpretations that can contribute to the resolution of criminal investigations and legal disputes.

Firstly, as it has been illustrated in the introductory part of the paper, forensic linguistics has had a key role in legal and criminal cases at least since the late 1960s. The Timothy John Evans case in the United Kingdom serves as a tragic example of the consequences of an erroneous forensic analysis, inadequate legal representation, and systematic injustices. That is, as a result of a posterior forensic analysis of Evans' statements, linguists were able to prove that his confession was most likely coerced and not entirely dictated by him. In consequence, this case had a profound impact on legal reforms in the United Kingdom and thus it demonstrated the importance of the field.

Secondly, the analysis of legal language and the language of the court in forensic linguistics also plays a pivotal role in enhancing accuracy and clarity within the legal system. As has been demonstrated in the second part, the language employed in legal contexts and the courtroom is complex and outdated. Therefore, its analysis is essential when it comes to identifying ambiguities, inconsistencies, and potential misinterpretations and thereby making it more accessible to those unfamiliar with the legal system.

Finally, forensic linguistics plays a crucial role in determining the authorship of disputed texts or recordings. As has been exemplified in the cases of Jenny Nicholl and Amanda Birks, the analysis of text messages became key pieces of evidence for the prosecution. In both cases, detectives suspected that the messages were not sent by the victims and instead by the initial suspects of each case. In order to demonstrate this statement, forensic linguists, Malcolm Coulthard for the Nicholl case and Tim Grant for the Birks case, were appointed and each one of them applied different methodological techniques. On the one hand, Coulthard applied a descriptive and stylistic method. This approach essentially analyses the use of 'style markers' and their level of 'consistency and distinctiveness'. On the other hand, in the Amanda Birks case, Grant combined a stylistic and statistic approach. That is, he effectively utilised the descriptive stylistic methodology developed by Coulthard and incorporated statistical measurements of text and author similarity to achieve successful results. Nevertheless, as for now, there is still no conclusive answer regarding which method is more effective when it comes to solving forensic cases.

Furthermore, the phonetic analysis in the Yorkshire Ripper Hoax case provided insights into the suspect's accent, dialect, and speech patterns. Even though the phonetic analysis did not directly identify the hoaxer's identity, it provided valuable assistance. Therefore, had the police considered Ellis' insights, it is possible that the actual killer could have been identified sooner.

To conclude, this research has demonstrated some of the possible applications of the field of forensic linguistics in real-life legal and criminal cases, and subsequently, it has illustrated its crucial role in their resolution. Therefore, forensic linguistics is a rather recent discipline that has helped to bridge the gap between language and the legal system. Its application in real-life cases has provided fundamental insights, contributing to the identification of authors, detection of deception, interpretation of texts, and ultimately, the

pursuit of justice. Thus, as technology continues to advance and new linguistic phenomena emerge, forensic linguistics will continue to evolve and make substantial contributions to the field of law enforcement and the criminal justice system.

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