Research Article

THE ROLE OF FORENSIC LINGUISTICS IN CRIME INVESTIGATION: USES IN LEGAL PROCEEDINGS

Linguistics

Hazhar Ramadhan Ahmed — **Lecturer and PhD Researcher, University of Raparin College of Basic Education Kurdistan Regional Government, Iraq**

Abstract

This paper considers the extent to which forensic linguistics can be considered a science, and outlines some ways in which it is useful in legal proceedings, including voice identification, the interpretation of police-suspect interaction, verification of police reports, and cross-cultural insights into speech patterns in a courtroom context. On the basis of the analysis, the paper concludes that Forensic linguistics can prove beneficial for the investigation of crimes, analysis of the judicial procedures, and particularly disputes in law. It can also be used for the analysis of courtroom discourse and interpret and translate the legal documents for their readability and comprehensibility. Moreover, the police cautions issued to the suspects can also be analyzed for their comprehensibility and the authorship attribution can be established for written or spoken texts. It, therefore, works as the interface between language, crime, and the law.

Introduction

Forensic linguistics is an interdisciplinary field of applied/descriptive linguistics and an emerging sub-discipline of forensic science. Forensic linguistics analyzes and measures the language with respect to "crime, judicial procedures or disputes in law" (Danielewicz-Betz, 2012). It is believed and proved that Forensic linguistics can prove beneficial for the investigation of crimes, analysis of the judicial procedures, and particularly disputes in law. It can also be used for the analysis of courtroom discourse and interpret and translate the legal documents for their readability and comprehensibility. Moreover, the police cautions issued to the suspects can also be analyzed for their comprehensibility and the authorship attribution can be established for written or spoken texts. It, therefore, works as the interface between language, crime, and the law (Figure 1).

Although the results obtained after forensic linguistics are not as much accurate as of the DNA results, yet when the legal complications are explained by the expertise of descriptive and applied linguists, forensic linguistics proves beneficial to disclose the hidden information and lead to a better verdict in legal cases. However, for the expert use of forensic linguistics, the analysts need to be familiar with "the broader application of linguistics as a social science, including phonetics and phonology, morphology, syntax, and semantics, discourse analysis, pragmatics, psycholinguistics, neurolinguistics, sociolinguistics, dialectology, computational linguistics, and corpus linguistics" (Danielewicz-Betz, 2012). The forensic linguist is used for the application of linguistic knowledge and techniques to the language of legal cases and proceedings (Figure 1). It is also used to solve the private disputes arising between the parties which may result in legal action.

The researchers in this paper have in detailed analyzed characteristics of forensic linguistics which may lead to consider it a science. Then an overview of the role of forensic linguistics in few important areas has been given. Finally, a closer examination of authorship attribution has been carried out which is one of the most important areas where forensic linguistics can play an important role.
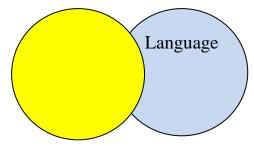

Figure 1. Interface between the language and the law (SlideServe, 2021)

Literature Review

Legal methods can be investigated with either forensic or non-forensic application. In forensic linguistics, the scientific approach is used because a scientific method needs accurate results and for that matter hypothesis testing and litigation-independent testing are applied. During these tests, strict controls over data quantity, data sources, and analytical objectivity are exercised.

There are some restrictions that must be applied while providing linguistic expertise in the context of legal proceedings. These principally are applied because there is a varying degree of acceptability in the courtroom. There are also varying degrees of reliability related to the shortcomings in the available data. These shortcomings may be due to the brevity of documents or data samples which are small. Moreover, the general characteristics of the language and its intrinsic nature of language are also to be considered. For the sake of quality analysis, the experience and knowledge of individual linguists which are involved in the analysis are the prerequisites.

Forensic Linguistics sounds like a "science" when the "linguistic equivalent of an individual fingerprint—a 'linguistic fingerprint'" term is considered. As every human being uses language in a different way, this difference can be observed like fingerprints; easily and surely. However, in reality, it is impossible to distinctly compile a collection of markers that would stamp a particular speaker or writer. Therefore, the notion of 'linguistic fingerprint' appears essentially flawed and there is little hard evidence to support it. Accordingly, it is better to focus on the distinctive *style* of a given person, as detected in a set of known and suspected texts within an inquiry (Danielewicz-Betz, 2012). This may be called "authorship attribution" as explained in Figure 2.

Application of Forensic Linguistics

Forensic Linguistics can be applied in many fields in the context of the law and criminal investigation. The most useful applications of this branch of linguistics are forensic phonetics, Language in Authority and Power Relations, Discrepancies in Police Reports, Cross-Cultural and Cross-Linguistic Differences in Testimony and authorship attribution. Here follows a brief description of all of these applications:

i. Forensic Phonetics: Forensic phonetics is used to analyze voice during a criminal investigation. While using forensic phonetic techniques, "technical voice comparisons lay voice recognition, transcription of spoken language, speech signal enhancement, and the authentication of recordings" (Danielewicz-Betz, 2012) is carried out. Primarily the job of a Forensic phonetician is to identify the speaker. For that purpose, he/she resolves disputed content recordings, transcribes spoken texts. A forensic phonetician also sets up "so-called voice line-ups or parades in which no eye- but ear-witnesses are asked to take part in order to identify a suspect" (Danielewicz-Betz, 2012). To identify the suspect, the dialect, accent, pronunciation of phonemes, etc. are important. However, voice identification needs to be conducted without delays and much care and caution are needed while conducted it. Delays in the conduct result in fading of memory of voices because as compared to visual memory the sound memory fades aways relatively faster despite the fact that in criminal situations, witnesses are capable of storing more features of a particular speaker. The spoken texts need to be transcribed into written form for forensic investigation because there are chances that some pieces of information might go missing or are inaccurately spoken by the witness because of certain reasons such as contextual information or paralinguistic features (Danielewicz-Betz, 2012) because the spoken text heavily depends on contextual information and is different from the written discourse in the mode of expression.

ii. Language in Authority and Power Relations: In most legal situations, before the arrest or interrogation, the suspect is given the right to remain silent, the right to legal counsel, and the right is told that anything said by the suspect can be used in court against him/her. This illustrates that speech acts performed by the police officers "may lead to the apparent consensual nature of searches," (Danielewicz-Betz, 2012) and the questioning can be taken as coercive. Further, the relationship between the authority figure and a suspect/defendant also seems to be asymmetric (Danielewicz-Betz, 2012).

According to Solan and Tiersma (2005), something said by the police cannot be interpreted as directives on the semantic level, but while speaking pragmatically, it presents an authoritarian context: "Does the trunk open?" "You don't mind if we look in your trunk, do you?" "Why don't you put your hands behind your back, all right?" Even more coerciveness is observed in "requests," for example: "Would you mind if I took a look around here?" "Well, then, you don't mind if I look around in the car, do you, or would you?"

Usually, the police do not have enough authority to make promises such as "We'll go easy on you if you confess", yet this is implied in their "requests" to comply. On the other hand,

common people tend to interpret requests as orders, but in contrast, their own "indirect wishes" often go unnoticed, for example, "Maybe I should talk to a lawyer." This problem is further exacerbated due to problems related to the comprehensibility of the warnings and other police languages for many suspects, including defendants who may be (semi-)illiterate, speakers of another language, or too young or mentally-challenged to understand their rights to remain silent and seek legal advice (Solan and Tiersma, 2005, p. 38; Danielewicz-Betz, 2012).

In any case, the asymmetric nature of the relationship between the police and the defendant can result in a text, which can be a record of an interview, on video, or audio, or a statement on paper. This may be considerably different from what the suspect would have said when given an opportunity to speak or write in "a non-coercive or less threatening environment" (Solan and Tiersma, 2005). This means that despite the requirement of "strong contextual reliance in the interpretation of speech acts, courts may habitually use out-of-context inferences and entailments to reach decisions" (Danielewicz-Betz, 2012).

iii. Discrepancies in Police Reports: During legal proceedings and investigations, the accuracy of police reports and suspect's statements is important. The relationship between the exhibited document and the events in this regard needs to be considered for establishing this accuracy. This is done through analyzing the time frame, incident notes were taken, a chronology of the events, and the accuracy in recalling these events. Certain common features between the statement and the incident notes, together with chronological inconsistency may result in suspicions about the police records. That is the reason that videotaping has been the law for many years in the UK and Australia (Solan and Tiersma, 2005).

iv. Cross-Cultural and Cross-Linguistic Differences in Testimony: Linguists, study differences in varieties and dialects within a given language, and across cultures and languages. Unfortunately, this cross-cultural linguistic research may not be taken into account by law enforcement authorities passing crucial judgments related to someone's guilt or innocence. For example, "silence" is given different meanings in different cultural contexts so the particular meaning attached to it may also influence the judgments in the court, and in few cultural contexts, the silence even for a few seconds is not acceptable (Eades, 2008).

There may also raise confusion and misunderstanding due to tag questions specifically in testimony to be interpreted. An example of this may be that to deny an accusation, in the English language "negative tag questions" require a negative answer e.g., "You took the money, didn't you?" "No, I didn't." on the other hand, tag questions in many other languages, including some Asian languages; can be answered either way - negatively or affirmatively. This does not have any relatives with alteration in the meaning. Ultimately, a person may be deemed guilty due to cross-cultural differences in utterance interpretation as expressed, for example, in syntax, prosody, or even non-verbal signals involved in producing a statement (Eades, 2008).

v. Authorship Attribution: Authorship attribution means the inferring of characteristics of the author from the characteristics of documents which is produced by that particular author. It means establishing "who wrote the text" using the text as evidence. Attribution is established through various characteristics of the text such as what average word length or number of syllables was used by the author. The use of articles or determiners (an, a, and the), their frequency, and type-token ratio, which is a measure of lexical variety, are also analyzed. Furthermore, punctuation in terms of overall density, syntactic boundaries, and the measurement of unique words in a text, contribute to solving the task. The relative frequency of various syntactic markers is also important in this regard. Generally speaking, it is easier to eliminate someone like the author than pinpoint someone with certainty (Chaski, 2005; Kredens, 2000).

Forensic linguists are required to compare documents written by suspects with other pieces of evidence/documents. They determine whether the documents were written by the same author or not. As every person uses unique language characteristics, this analysis becomes possible. It is a known fact that if a person refers using certain words or phrases over others, and also has a different writing style from others. Likewise, a person may have an interpretation of grammar different from others. To conclude, it can be said that everyone has their own version of the language, called an idiolect which may be so unique that a forensic linguist can for sure identify two documents written by the same person.

In most criminal cases, this analysis becomes difficult because of the very short length of the relevant document which maybe only ten words or fewer long. Such length is not enough to analyze the idiolect. Where long and elaborate documents are available, unique linguistic patterns such as word choice or writing style may help to establish the authorship attribution quite well (Figure 2).

The case of Unabomber is the most well-known case where law enforcement was helped by forensic linguists to identify the criminal. A serial bomber sent and placed several bombs in universities and airlines. After that, he sent a very long manifesto called "Industrial Society and its Future" to various publishers demanding it to be published. When they published the manifesto, a person named David Kaczynski read it and found it disturbingly familiar due to the word choices and the philosophy which resembled those of his brother Theodore Kaczynski. For example, David recognized the common saying "have your cake and eat it too;" as Ted's, because Ted preferred to say "eat your cake and have it too." These words were unique and recognizable (Figure 5), although there were other indicators also. When forensic linguists analyzed the manifesto, comparing its phrasing and philosophical statements to other documents which were provided by David, and other documents found in Kaczynski's cabin, they concluded that those documents had been written by Theodore Kaczynski (Crime Museum, 2021).
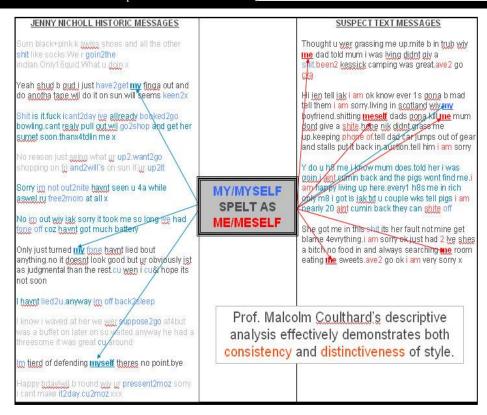
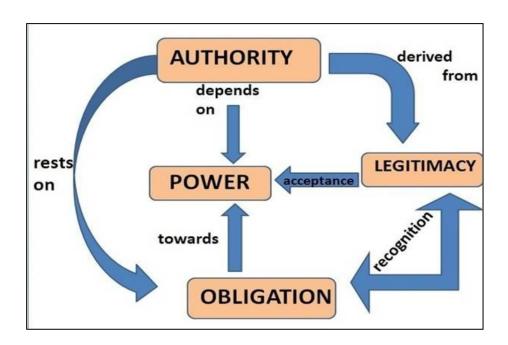Figure 2. Text message analysis for authorship attribution (Mitchell, 2008)

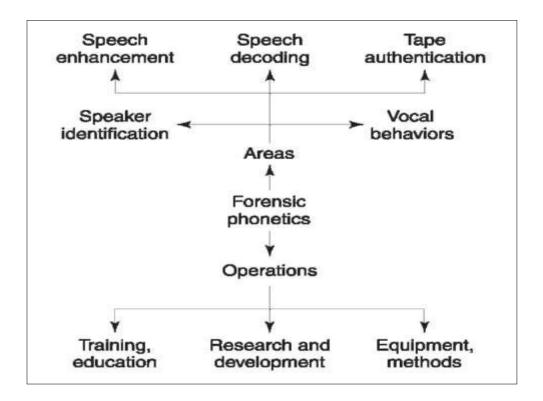Figure 3. The relationship between power, authority and legitimacy (Parker, 2021)

Figure 4. The nature and scope of forensic phonetics (What-When-How, 2021)
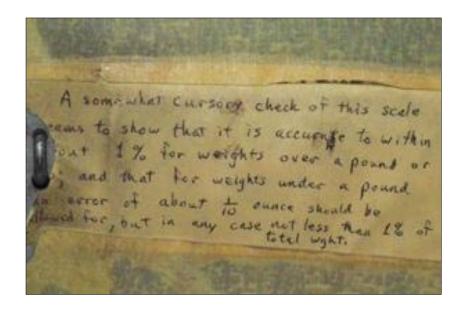

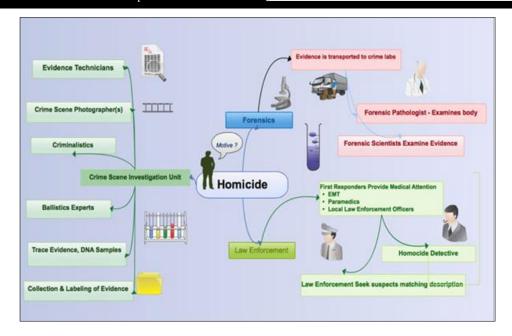
Figure 5. Ted Kaczynski's handwriting (Crime Museum, 2021)

Figure 6. Crime Scene Investigation Roles, Responsibilities & Protocols
(Criminal Justice School info, 2021)

Conclusion

On the basis of the analysis, it may be concluded that Forensic linguistics as a subfield of applied/descriptive linguistics and an emerging sub-discipline of forensic science, analyzes and measures the language with respect to crime, judicial procedures, and disputes. For this purpose, analysis of courtroom discourse, legal documents, police cautions, and authorship attribution can be carried out by forensic linguists. It works as the interface between language, crime, and the law. The forensic linguist is used for the application of linguistic knowledge and techniques to the language of legal cases and proceedings. It is also used in private disputes which require settlement between parties and which may result in legal action.

References and Bibliography

Ahmed, H. R. (2019). Syrian Refugees Children Challenges and Problems of Learning the English Language as a Foreign Language: the Campground of Barika as an Illustration in Kurdistan Region, Iraq. *Palarch's journal of archaeology of egypt/ egyptology* 18 (1), 3592-3601

Ahmed, H. R. (2019). The Perceptions and Attitudes of EFL Learners in Kurdistan Region of Iraq towards Online English Courses. *Research Journal of English Language and Literature,* 7 (4), 288-300.

Ahmed, H. R. (2020). A Speech Act Analysis of the Prime Minister of Pakistan Imran Khan's Speech at UNGA with respect to Islamophobia. *International Journal of Social Sciences & Humanities,* 5 (2), 59-71.

Ahmed, H. R. (2020). Analyzing Errors Made by Kurdish EFL Learners in Applying the Rules of Syntactic Structure. *AJSRP*, 4 (34), 159-168.

Ahmed, H. R. (2020). Inaccuracies of Contradistinguishing Adjectives and Adverbs that Perpetrated via EFL Students at ME in Kurdistan Region, Iraq. *Electronic Research Journal of Social Sciences and Humanities,* 2 (IV), 64-74.

Ahmed, H. R. and Amir, S. (2021). Speech Act Analysis of the Joseph R. Biden, Jr.'s Inaugural Address on 20th of January 2021 as the 46th President of the USA. *Electronic Research Journal of Social Sciences and Humanities,* 3 (I), 43-56.

Chaski, C. E. (2005). Empirical evaluations of language-based author identification techniques. *International Journal of Speech, Language and the Law*, 8 (1): 1-65.

Crime Museum. (2021). Forensic linguistics & author identification. *Crime Museum LLC.* Retrieved March 1, 2021 from https://www.crimemuseum.org/crime-library/forensic-investigation/forensic-linguistics-and-author-identification/

Criminal Justice School info. (2021). Crime Scene Investigator Job Description. Retrieved March 1, 2021 from https://www.criminaljusticeschoolinfo.com/crime-scene-investigator-job-description/

Danielewicz-Betz, A. (2012). The role of forensic linguistics in crime investigation. In Language Studies: Stretching the Boundaries by Littlejohn, A. and Rao, M. S. (Eds): Cambridge Scholars Publishing

Eades, D. (2008). *Courtroom talk and neocolonial control.* Berlin and New York: Mouton de Gruyter.

Kredens, K. (2000). Forensic linguistics and the status of linguistic evidence in the legal setting. Unpublished Ph.D. dissertation. University of Lódz.

Leech, G. (1983). *Principles of Pragmatics.* London: Longman.

Mitchell, E. (2008). The case for forensic linguistics. *BBC News.* Retrieved March 1, 2021 from http://news.bbc.co.uk/2/hi/science/nature/7600769.stm

Parkar, K. (2021). What is the relationship between power, authority and legitimacy? *Quora.* Retrieved February 28, 2021 from https://www.quora.com/What-is-the-relationship-between-power-authority-and-legitimacy

SlideServe. (2021). *Forensic Linguistics: Can Words Help Solve a Crime?* Retrieved February 28, 2021 from https://www.slideserve.com/jayme/forensic-linguistics-can-words-help-solve-a-crime

Solan, L. M. and Tiersma, P. M. (2005). *Speaking of Crime: The Language of Criminal Justice, Chicago and London:* Chicago: The University of Chicago Press.

What-When-How. (2021). *Phonetics.* Retrieved March 1, 2021 from http://what-when-how.com/forensic-sciences/phonetics/